



The National Future Farmer

Owned and Published by the Future Farmers of America



April-May, 1966

Now, 140,000 Scouts later...the new Scout Sportop



When over 140,000 discriminating buyers have proven the SCOUT is a winner, what do you do to make it even better for the sportsman? Exactly what the designers and engineers at INTERNATIONAL® did.

You give it a new slant-back top, hard or soft—plus some other sporty features—and call it the new SCOUT SPORTOP.

You can fold back the soft top—like a sports car—for the fun of it. But you can go more fun places with the SCOUT SPORTOP than anyone

ever thought of going with a conventional sports car.

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have several new sports enthusiasts in the family.

So be a sport about it. Take your family down to an INTERNATIONAL Dealer to look over and test drive the new SCOUT SPORTOP... and to let your imagination go. You'll come out with a real winner.

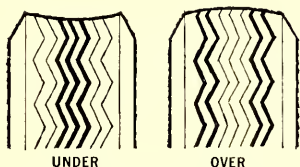
 **INTERNATIONAL HARVESTER
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CHICAGO, ILLINOIS

Scout is the registered trademark for a vehicle manufactured exclusively by International Harvester Company.

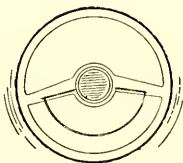
Will you know what to look for when buying your first car?

Buying a used car? Learn to read the signs—the tires, the sheet metal, the upholstery. They can tell you much about how the car was driven and about its general condition. You'll end up getting more car for your money, making your first car an even bigger pleasure than you'd hoped.

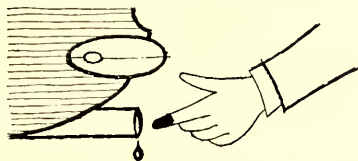
- 1** Look at the car from all angles and under the hood. Do you see any welds? How about the rocker panels? Any evidence of filler metal? Find out how badly the car was damaged. If the frame was bent, be careful of this one.



- 2** Here's one on tires. These pictures show the results of under- or over-inflation. If tires weren't properly inflated, they can't have the mileage left in them. More important, it suggests the previous owner wasn't too attentive to maintenance. Don't pay for his carelessness.

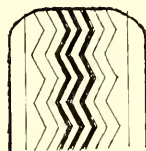


- 3** Check the steering wheel. Don't stand for more than two inches of free play. More than that is unsafe and could involve you in an expensive repair job.

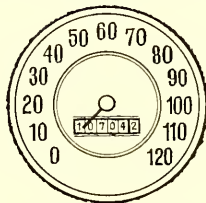


- 4** Take a look at the inside of the tail pipe. Is it black and greasy? If it is, the chances are the car has been burning oil for some time. A good one to stay away from.

- 5** How about the brake pedal? Does it offer firm resistance after you press it down an inch or two? If it doesn't there could be a leak in the system—and another expensive repair.



- 6** Here's another clue in the tires. Are the edges of the tread, where they meet the sidewall, still square? Or are they rounded off? If the latter, somebody's been peeling rubber on corners. That doesn't suggest careful handling. Probably not the car for you.



- 7** You've checked the odometer mileage of course. But don't be satisfied with that. Take a look at the upholstery, too. If the driver's seat is depressed, the car probably has lots of miles on it. Look at the pedals, too. Does the wear on them suggest more mileage than the odometer? If they're brand new, be suspicious.

If the car drives like new—responsive, firm, no rattles—chances are you have a good machine. But the best ten-dollar investment you can make is to have a mechanic friend check it over carefully *before* you buy. Good luck and good driving.

What tire is first choice for original equipment on new cars? Firestone—with good reason.

YOUR SYMBOL OF QUALITY AND SERVICE

Firestone

A Sponsor of National Student Traffic Safety Program, National 4-H Automotive Program and FFA

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JOE SPENCER IS NO ORDINARY FUTURE FARMER. HE HAS SET A TOPNOTCH RECORD WITH HIS CROP FARMING ENTERPRISE AT ONEY, OKLAHOMA. IN FACT, HIS EFFORT WON HIM THE NATIONAL AWARD FOR CROP FARMING. NO ONE IS CLOSER TO THE FACTS THAN A GOOD MANAGER, SO WE LET JOE TELL HIS OWN STORY IN HIS OWN WORDS.



62 Servicing Small Engines

CHANCES ARE, IF YOU HAVE A WATER PUMP OR ELEVATE HAY OR GRAIN, YOU HAVE A SMALL ENGINE THAT MUST BE SERVICED. OUR CONTRIBUTING WRITER ON AGRICULTURAL MECHANICS GIVES VALUABLE POINTERS ON HOW TO KEEP SMALL ENGINES ON THE JOB. HIS STORY IS TIED IN WITH A SMALL ENGINE IDEA FOR VO-AG WORTH CHECKING.

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Future Farmer M. L. McCrea, Jr., shows valid pride in his growing Angus herd. He lives at Maysville, Missouri.

PHOTO AMERICAN ANGUS ASSOCIATION

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THE NATIONAL FUTURE FARMER is mailed every two months on the following dates:

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The National FUTURE FARMER

"One grease for all my equipment makes lubrication easier for me."



Texas farmer C. C. Franz said it. He's been in the farming business since 1947. Uses 5 tractors, 2 combines, and a pickup truck to farm 844 acres near Houston. So he knows the value of using the right lubricant to keep them working. His lubricant is Marfak Multi-Purpose.

"Using different greases for the lubrication needs of my equipment was a nuisance—and there was always the possibility of using the wrong one and doing harm.

"But now I use just one—Texaco's Multi-Purpose Marfak. It protects everything I've got—tractors, combines, pickup. It doesn't pound out or leak out. Resists water and wear.

"My Texaco Farm Service Distributor put me on to that one. It's one of the reasons why I depend on him."

Depending on your Texaco Farm Service Distributor is good business. In this case, it's helping Mr. Franz reduce maintenance costs and repairs, and keeping his equipment in service longer.

Isn't that the kind of help *you* can use? Give your Texaco Farm Service Distributor a call. He's got the money-saving, fuel-saving, engine-protecting Texaco products you need for your farm. He'll deliver them—on *time*—before your need becomes a problem.

Trust Texaco Farm Service



Here are some of Texaco's top-quality petroleum products for the farm: 1. Marfak Multi-Purpose lubricant. 2. Havoline and Ursa Motor Oils. 3. Multigear Lubricant EP. 4. Regal Oils for hydraulics. 5. Famous Fire Chief gasoline and Texaco Diesel fuel.



workhorse

That's a rugged Myers Submersible Pump! Always ready, always on the job.

The real workhorse on today's farm. The most-used piece of equipment around.

On duty 24 hours a day, 365 days a year.

Quiet, powerful, efficient Myers submersibles are built to meet the water needs of the future as well as those of today. When you want really dependable pump performance, look for a Myers Submersible. For more information on water systems, see your Myers Dealer.

Myers

...the finest name in pumps

THE F. E. MYERS & BRO. CO. MCNEIL CORPORATION
405 ORANGE STREET • ASHLAND, OHIO 46012

THE EDITORS' CORNER



New Staff Member

Tom Davidson has joined the staff of your National Magazine as a regional advertising manager. Previously he served as teacher of vocational agriculture and FFA advisor at Pinedale, Wyoming, and edited the *Wyoming Future Farmer*.

Tom attended high school at Laramie, Wyoming, and was a member of the Snowy Range FFA Chapter. Among the awards he received was the Outstanding Athletic and Scholar Award for the class of 1956.

He later attended the University of Wyoming on two agricultural scholarships and a four-year athletic scholarship. During four years as an FFA advisor, his Pinedale FFA Chapter had one American Farmer, four State Farmers, one state officer, and one state public speaker in addition to two State Gold Emblem ratings for the chapter and numerous other awards.



Davidson

In his new position, Tom will use his experience as both a former FFA member and advisor to assist companies and agencies in planning their advertising programs in *The National FUTURE FARMER*. He and his wife, Ann, have two children, Gary, age six, and Dodi, age two.

Associate Editor Resigns

We regret to announce the resignation of Howard Carter, who has served for the past seven years as an associate editor on the Magazine and head of the Official FFA Calendar program. Under his direction the calendar program has shown substantial growth with many adaptations and improvements made to fill the needs of local chapters. He particularly stressed the use of the Official FFA Calendar for public relations purposes rather than fund raising.



Carter

A man of many talents, Howard handled all layouts for the Magazine, contributed many ideas and suggestions for the improvement of articles and stories, and in countless other ways worked to give you a better magazine. He will be greatly missed.

In his new position with Industrial Trade Publications, Howard will be working on magazines serving the gas and oil drilling industry. This will not be a new field for Howard. He worked for a while in the oil fields of west Texas and Oklahoma after graduating from high school.

We know Future Farmers and advisors join us in extending to Howard and his family best wishes as they move to Conroe in the Houston, Texas, area where Howard will be headquartered.

Wilson Carnes

Editor



FIGHT THE HIGH COST OF HEALTHY GAINS

with the Milk-Bank nutrition of Kraft Feed Boosters

Here's their bank of milk nutrients: dried whey, delactosed whey, hydrolyzed whey, cultured whey, cheese, dried buttermilk.

Sure, if money were no object, you could get fast, healthy gains easily. The trick is to do it *without* adding to your feed cost, and if possible, cut your cost per pound of gain.

It is possible with Kraft Feed Boosters—Pex products for poultry, Kraylets pellets and Kraft Pig Pre-Starter for swine, Kaff-A products for dairy and beef cattle, and Nutri-Plus Boosters for sheep. And, to give horses extra bloom, gloss, and vigor, you can use Pace Pellets.

These feed boosters give animals nutrients that ordinary rations don't usually provide: milk nutrients rounded out with other important ingredients. With the lactose, protein, minerals and vitamins that the milk nutrients supply, any ration will produce more healthy gains more efficiently. Here's why:

LACTOSE—HARDWORKING CARBOHYDRATE

The Milk-Bank Boosters provide lactose, a hard working carbohydrate, especially important for young and growing animals. It outperforms all other sugars, giving you a better rate of gain with fewer digestive upsets.

In addition, lactose promotes acidity in the digestive tract, keeping it clean and healthy. And with lactose in the ration, animals absorb and use more calcium, phosphorus, and magnesium.

PROTEIN RICH IN AMINO ACIDS

Protein is another key element in the Milk-Bank. Lactalbumin and casein are among the richest in essential amino acids, ideal complements to grain protein.

They promote animal health and growth, help build soft tissues and disease-fighting antibodies.

BONUS IN MINERALS AND VITAMINS

Milk-Bank Feed boosters offer a good supply of minerals, too: calcium, phosphorus, potassium, sulphur, and magnesium plus trace elements such as manganese, iodine, copper, iron, and cobalt.

The vitamins—members of the B complex—in these feed boosters supply added nutrition and reduce the need for vitamin supplements. Finally, Milk-Bank feed boosters provide unidentified growth factors which stimulate growth and improve over-all feed efficiency.

Feed rations that work harder and bring out the best in your stock—rations that include the Milk-Bank Boosters by Kraft. Ask your dealer or write for Kraft Research Proved-Farm Tested feed formulas now. Kraft Foods Agricultural Division, Dept. 19, 500 Peshtigo Court, Chicago, Ill. 60690.



KRAFT

... where better nutrition starts with milk



Looking Ahead

LIVESTOCK

HOGS

● Producers are expected to market about 46 million hogs during December, 1965, and May, 1966, according to the USDA's Economic Research Service. That's up 7 percent from a year ago. As a result, hog prices are expected to weaken during the second half of the year.

● The stress and strain of modern living is taking its toll among hogs as well as humans. Veterinary scientists are reporting increasing evidence that stomach ulcers are becoming more common in hogs. The big outbreaks of ulcers occur during late pregnancy or at farrowing time. High corn rations have also been accused of contributing to ulcers.

BEEF

● An international center for the sale of livestock is the idea behind the recent purchase of the Leesburg, Virginia, livestock market. The market is located near Dulles International Airport, which serves Washington, D. C. It was purchased by the Canning Organization, one of the largest cattle sales groups in the nation.

● Scientists at the University of Wisconsin are on the brink of solving a serious livestock problem. They have isolated the chemical in red clover mold which causes the animal disease known as "slobbers." Now that the compound has been identified and named, scientists can probably develop a quick method to detect its presence in the field before hay is fed to livestock.

POULTRY

● It is estimated that 90 percent of the broiler chickens in the U. S. are grown under some type of contract system. There has been little information available to help you evaluate alternative contract proposals on the basis of net return. A recent article in the *Journal of Farm Economics* compared ten common proposals. The contract found most profitable to the grower was based on a payment per pound marketed of five times the point spread (live weight divided by feed-conversion ratio) of 1.60.

DAIRY

● Milk production per cow averaged a record 8,080 pounds in the U.S. during 1965. That's an increase over

the previous record high of 7,907 pounds for 1964. California led all states with an average of 10,840 pounds per cow. Arizona ranked second with a 10,370-pound average, and Massachusetts was third with a 10,100-pound average.

CROPS

NEW pH RECOMMENDATIONS

The commonly suggested pH level of 6.5 may be in for upward revision if others follow the lead set by Iowa agronomists. Their ten-year study indicates that the pH for maximum yields is not the same for all crops, but corn, oats, and alfalfa show need for a pH of approximately 7.0. Ohio research backs up most of their findings, the Iowans say.

RENTING HONEYBEES

W. A. Stephen, extension bee specialist at Ohio University, says renting honeybees can be a rewarding enterprise for both beekeepers and growers. Several firms in the West are renting bees and other pollinating insects successfully, he says. These firms contract with growers to supervise the colonies needed for the pollination of fruit, seed, and fiber crops. If you are interested, write to Stephen at 1735 Neil Avenue, Columbus, Ohio 43210.

AUGUST FALLOWING PAYS

It may be more profitable to plow the last cutting of alfalfa under in rotations of alfalfa and corn. This was the case in experiment at Morris, Minnesota. Letting alfalfa stand until killing frost reduced the corn yield the next year as much as 15 percent, compared with fallowing that began in August.

SOYBEAN ROTATION IMPORTANT

Iowa plant pathologist J. M. Dunleavy suggests that the increase of brown stem rot of soybeans may be caused by a gradual shift from a rotation like corn-soybeans-oats-meadow to one limited to corn and soybeans. Bordering corn fields with soybeans and reducing distance between soybean fields may also contribute to the increase.

PROTEINS FROM LEAVES

From India where food is an urgent subject comes this important announcement. The Central Food Technological Research Institute, Mysore, is reported to have developed a process for manufacturing protein from leaves at low cost. The experiments, it is claimed, proved that almost unlimited quantities of cheap proteins can be produced from leaves and match those produced from meat and fish.

MACHINERY AND BUILDINGS

NEW USE FOR GRAIN COMBINE

Agricultural engineers at Iowa State University are making the grain combine a more useful machine and hay-making an easier chore. The product is a grain combine with hay conditioner rolls attached. The attachment makes it possible to use the combine as a self-propelled windrower conditioner for hay and oats. Cost of operating a large combine for cutting hay is offset by the savings in labor since raking is eliminated. During an average day it can condition and windrow about 50 acres of hay.

STRONGER ADOBE BRICKS

Farm structures of adobe or soil-cement can be made twice as strong by using high pressure in the forming process, according to a report given at a recent meeting of agricultural engineers. The strongest bricks usually contain 8 to 15 percent cement, highly pressurized and are never damaged by rain or dampness.

THINNING MACHINE

Row crops may soon be thinned by machine to leave the proper amount of space between plants. A machine developed at the University of California is able to sense the plant to be saved by a length of copper tubing used as a probe. When the probe comes in contact with a plant, an electrical circuit is completed through the plant, causing a cutting blade to move through the row just ahead of the plant that was sensed. The blade removes all plants for a distance determined by the length of the blade.

Handsome truck on a down-to-earth job.

Ready for another long, hard day.

Over the fields and through the gears.

Lots of bumps, dirt, dust, heavy loads.

Lots of toughness, too.

It's a Dodge.

**Dodge trucks are Job-Rated to give you the best truck for
your kind of work. Try one.**

Dodge toughness doesn't cost any more.

Why settle for less?



Dodge Builds Tough Trucks

DODGE DIVISION



CHRYSLER
MOTORS CORPORATION

IF YOU HAVE A NEIGHBOR WHO OWNS AN...



**M-C ROTARY
SCYTHE**

He'll tell you:

1. He's never made better hay
2. He's never made it faster or easier
3. How it picks up rain-soaked hay, fluffs and reconditions it without damage, reducing drying time from days to hours
4. His M-C Rotary Scythe is the toughest, strongest haymaking machine on the market
5. He wouldn't sell it for twice what he paid for it if he couldn't replace it.

The best advertisement for M-C Rotary Scythes is the machine itself. This simple, ruggedly built machine mows, conditions and windrows in 1 operation and it walks through the toughest stands of hybrid forage crops, leaving a perfectly conditioned windrow, fluffy and light for quick field drying. Made in 6', 7' and 10' widths.

IF YOUR NEIGHBOR ISN'T LUCKY ENOUGH TO OWN AN M-C ROTARY SCYTHE

... why not write
for this **FREE**
Catalog and get
complete details
today?



Iron Horse Quality
**M-C FARM
EQUIPMENT**



THE MATHEWS COMPANY

DEPT. 546FF • CRYSTAL LAKE, ILLINOIS 60014

National Organization News

BOARDS OF STUDENT OFFICERS AND ADULT DIRECTORS MEET

Establishment of a national FFA chorus
and financial reports highlight meeting.

THE FIRST meeting of the FFA Board of Directors and Board of Student Officers for the current year was held in Washington, D. C., January 24-27. Mr. H. N. Hunsicker, national FFA advisor, serves as chairman of the Board of Directors, and FFA President Howard Williams chaired the Board of Student Officers.

In a brief opening statement, Mr. Hunsicker pointed out: "In the national organization of the FFA, the members have an active voice. Although Public Law 740 states that the final responsibility rests with the adult board, nevertheless, the students themselves play a great part in the business proceedings in accordance with their National FFA Constitution." In the case of joint board meetings, Mr. Hunsicker explained that following open discussion, the student officers act first on each item on the agenda; then the adult members of the Board of Directors vote to sustain or rescind the action of the student officers. The latter, he noted, was a rare occurrence.

One of the first items of business was the report of the national treasurer. National Treasurer Julian Campbell reported the FFA is in a strong financial position. Editor Wilson Carnes reported in detail on the operations of the Magazine for the period ending December 31, 1965.

Mr. Howard Carter gave a report on the FFA calendar. He stated that the FFA had a very encouraging year with the calendars in 1965.

The operations of the Future Farmers Supply Service were reviewed by Manager Edward Hawkins. He reported the Supply Service is operating efficiently with special effort being made to give chapters the best service possible. Authorization was also granted for the development of chaplain and parliamentary station markers.

Action was taken to set up a national chorus in the same manner as the national band, with states submitting applications for the national chorus to the director. Mr. I. S. Glover of Sylvester, Georgia, has been asked to serve as the director according to the report.

There was considerable discussion on the possibility of having a national FFA center on the organization's land at Alexandria. The national officers said they would like to see the center include a board room and rooms for national officers and other Future Farmers visiting the Washington, D. C., area. It could also serve as a site for leadership training conferences, they pointed out. Resulting discussion led to the appointment of a long-range planning committee for a national center to include a national archives. It was also decided that a temporary archives be established at the FFA Building.

Other actions authorized the implementation of educational exhibits by agricultural trade associations at the 1966 National FFA Convention and the making available of tape recordings of the national public speaking contest by the Supply Service.

Former National FFA Advisor Dr. A. W. Tenney reported on the status of the Peace Corps Project in West Pakistan. Dr. Tenney has been serving as director of this project and was authorized to continue in that position until July 1, when the project will terminate unless the Peace Corps gets an official request that it continue.

In wrapping up the meeting, Mr. Hunsicker commended Messrs. C. C. Eustace and Neal D. Andrew, whose terms as members of the FFA Board of Directors ended with this meeting. Mr. James Durkee, president of the National Vocational Agricultural Teachers Association, expressed thanks, on behalf of himself and his organization, for the invitation to attend and observe the proceedings of the two boards. This marked the first time that vocational agriculture teachers who serve as FFA advisors have had the opportunity to take part in and observe these meetings. Much was added by the "advisor point of view" expressed by their elected representatives.

This is by no means a complete summary of the four-day meeting. Minutes are kept of the deliberations, and an official copy is sent to every state FFA advisor.

The National FUTURE FARMER



He didn't change his hair cream
or his mouthwash
or his deodorant...

He just started wearing
Lee Leen pants.

Lee Leens really come on strong.
Tapered to the bone... low-riding at the waist
...and with a no-iron, permanent press.
That's why guys who are "in" are in Lee Leens.
Shown, Lee-Prēst Leens in Bob Cat Twill, a blend of
50% Fortrel® polyester/50% cotton. In Pewter, Sand,
Black. \$6.00. Leens: \$5.00 to \$7.00.

Lee-PRēst® Leens®
Your kind of pants...for your kind of action

H. D. Lee Co., Inc., Kansas City, Mo. 64141



This is the day you learn about guts!

It's your first jump. You're up 1,200 feet waiting to go. But all the training and all the practice never quite prepared you for the way you feel right now. Your pack never felt heavier. Yet, you never felt stronger.

You're ready.

There are five guys ahead of you. Now four. Now three. No one hesitates. You won't either. You're sure of your training. You're sure of yourself.

In 21 days of Jump School something happened to you. You learned things you never thought you would. You did things you never thought you could. It was tough. But it made you even tougher.

Okay. You're next.

Go!

During the long seconds before you feel the welcome shock of your chute opening, you learn about another thing:

Men call it "Guts!"

And if that's all Army Airborne training gives you, you'll still be miles ahead. But there is more. You can become a trained specialist in one of many exciting fields: electronics, communications, equipment maintenance, to name just a few.

Have you got what it takes?

Army



Parliamentary Procedure

By
Dr. Jarrell Gray

HAVE YOU ever attended an FFA meeting where a member wanted to present an item of business but didn't know how?

In a successful FFA meeting items of business are presented to members in an orderly and efficient manner. What steps, then, are necessary to present an item of business? They are:

1. Rising and addressing the president—"Mr. President."

A member must wait until the floor has been yielded before he rises to request recognition.

2. Recognition by president—"Bill." *It is also proper for the president to merely bow or nod in recognizing a member.*

3. Making the motion—"I move that..."

Brief explanatory remarks should precede the offering of a proposal. These may help to explain the importance or reason for offering the proposal.

4. Seconding motion—"Mr. President, I second the motion."

A motion is seconded without obtaining recognition. Neither is it necessary to rise. If a motion which requires a second does not receive one, it dies for lack of a second.

5. Statement of the question—"It has been moved and seconded that..." *If the question is debatable, the president states, "The question is now open for discussion or debate." A question is not before the chapter until it has been stated by the president.*

Following recognition by the president, a member "has the floor" and is entitled to speak or present his business. In accordance with proper rules of procedure, other members should remain seated during his possession of the floor unless they are entitled to interrupt.

Debate, or discussion, on debatable questions is in order after the question has been stated by the president and after the floor has been obtained.

Debate must be limited to the immediately pending question, which is the last question stated by the president.

When it is evident that discussion is drawing to a close, the president may encourage its termination by asking:

"Are you ready for the question?"

Such an inquiry does not stop de-

bate since a member may still offer discussion if he so desires. Too, a motion of higher rank may be proposed here or previously at a proper time. If there is no response, the president puts the question.

Immediately prior to putting the question or taking the vote, the president may wish to restate the question by stating: "Those supporting the motion that... say aye. Those opposed say no."

After the voting is completed, the president announces the result and effect of the vote. "The ayes have it and the motion is carried. We will..." (States effect of the motion passed.)

A tap of the gavel should follow the announcement of the results. A vote does not go into effect until the announcement is made.

New Castle, Pennsylvania

Q. Should the chapter have discussion and a vote on the action recommended by the committee under "committee reports" or under "new business"?

Howard F. Fox

A. An FFA chapter, when following an order of business such as is suggested in the FFA Manual, should have discussion and a vote, if these are necessary, following the report which is given under "committee reports." When committees have been charged with the responsibility of investigating or reporting upon a matter, their report should close with a formal resolution pertaining to all their recommendations. The chapter may then adopt, reject, or dispose of their recommendations.

Do you have a question on parliamentary procedure? If so, you can get a direct reply from Dr. Gray, and your question may be selected for this column in the next issue.

Answers are based upon "Parliamentary Guide for FFA" by Dr. Jarrell D. Gray. For direct replies, send your question to Parliamentary Procedure, The National Future Farmer, Alexandria, Virginia 22306. Enclose a self-addressed, stamped envelope.



How to get the facts about the Army Airborne.

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NFF 4-5/66

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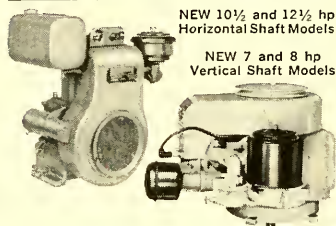
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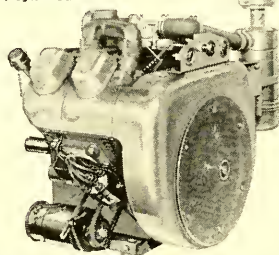
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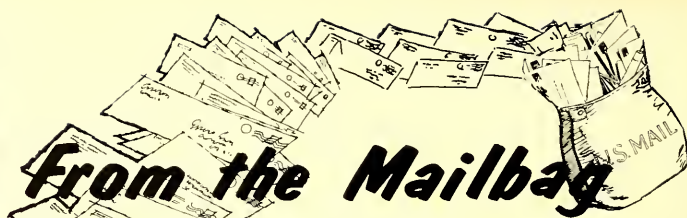
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Montrose, Colorado

I am writing you in regard to the recent change in the national FFA creed. I am an FFA member and am, indeed, very proud of the creed. I cannot see why the word "farmer" is such a dirty word. Maybe we do not realize that farming is a very important industry and is the true strength of any nation.

I cannot see why people are so narrow-minded as to make this change. I understand that the reason for the change was that some people in the East do not want to be called "farmers." I am told that the Board of Directors made the change. We are supposed to be a strong, democratic organization. I think it would be a little more democratic if the boys from the sticks (west of the Mississippi) had a little more representation. I understand we have only one board representative from west of the Mississippi.

Most agriculture students in Colorado are proud of being farmers and are disappointed by the fact that we can no longer call ourselves as such. To me the word "farmer" stands for a proud occupation, and I resent this change in such a proud organization.

Don Coram

Don, the reason given for changing the FFA creed was to make it more meaningful for ALL Future Farmers including those who are going into off-farm agricultural occupations as well as Future Farmers like yourself who are in production farming and ranching.

The Board of Directors did not make the change themselves. The change in the creed was considered by the Special Study Committee, which referred it to the Board of Directors in Kansas City just prior to the National Convention. The Board of Directors referred the changes to an FFA committee, and then these recommendations were presented to the delegates where they voted to accept the changes as stated in the February-March issue of "The National FUTURE FARMER." This will be covered in the convention proceedings, which will be mailed to FFA chapters very soon.

At the October board meeting the area west of the Mississippi was represented by Mr. C. C. Enstace, state FFA advisor in Kansas; Mr. Percy Kirk, state FFA advisor in Wyoming; and Mr. E. J. Johnson, Pacific Region representative in the National Office. National officers from the area were Ivan Hunt of Arizona, Larry Previtt from Missouri, and Evan Green from your own state of Colorado. I might also mention that Mr. William Paul Gray, the national executive secretary for FFA is formerly from Colorado.—Ed.

Madison, Wisconsin

Thank you for our "D's" article in "The FFA in Action" section of the February-March issue. Since the article appeared, we have had some interesting observations and repercussions here in the state office concerning "D's."

Dale Aebischer—Chief, Agriculture Education

Doyle Beyl—Executive Secretary, Wisconsin FFA Association

Doering, Floyd J.—Supervisor, Vocational Agriculture

Doris—Secretary

Diane—Secretary

Doreen—Secretary

This leaves only A. B. Cordes, supervisor, whose initials "ABC" quite naturally precede "D," and two secretaries. Gene has consented to being called "Ditto," and Liz has agreed to change her name to "Diz."

F. J. Doering
State Supervisor

Fayetteville, North Carolina

Enclosed is a list of subscribers to the FFA magazine. Each FFA member enjoys reading the magazine very much. You are doing a very fine job, and every member here wishes you the greatest success in the future.

Central Chapter has been 100 percent in subscribing since the magazine was first published.

W. S. Boyd
Advisor

Allen, Nebraska

I think you publish a wonderful magazine that helps everyone, including girls, learn all there is to know about the FFA.

I especially liked the special section, "National Convention Headlines," in the December-January issue. I was unable to attend the convention, but that article told me a lot about the great FFA event. I truly enjoyed it.

The previous issue supplied me with information for a report at school.

I am a junior in high school this year. After my graduation, I am certain that I will continue my subscription.

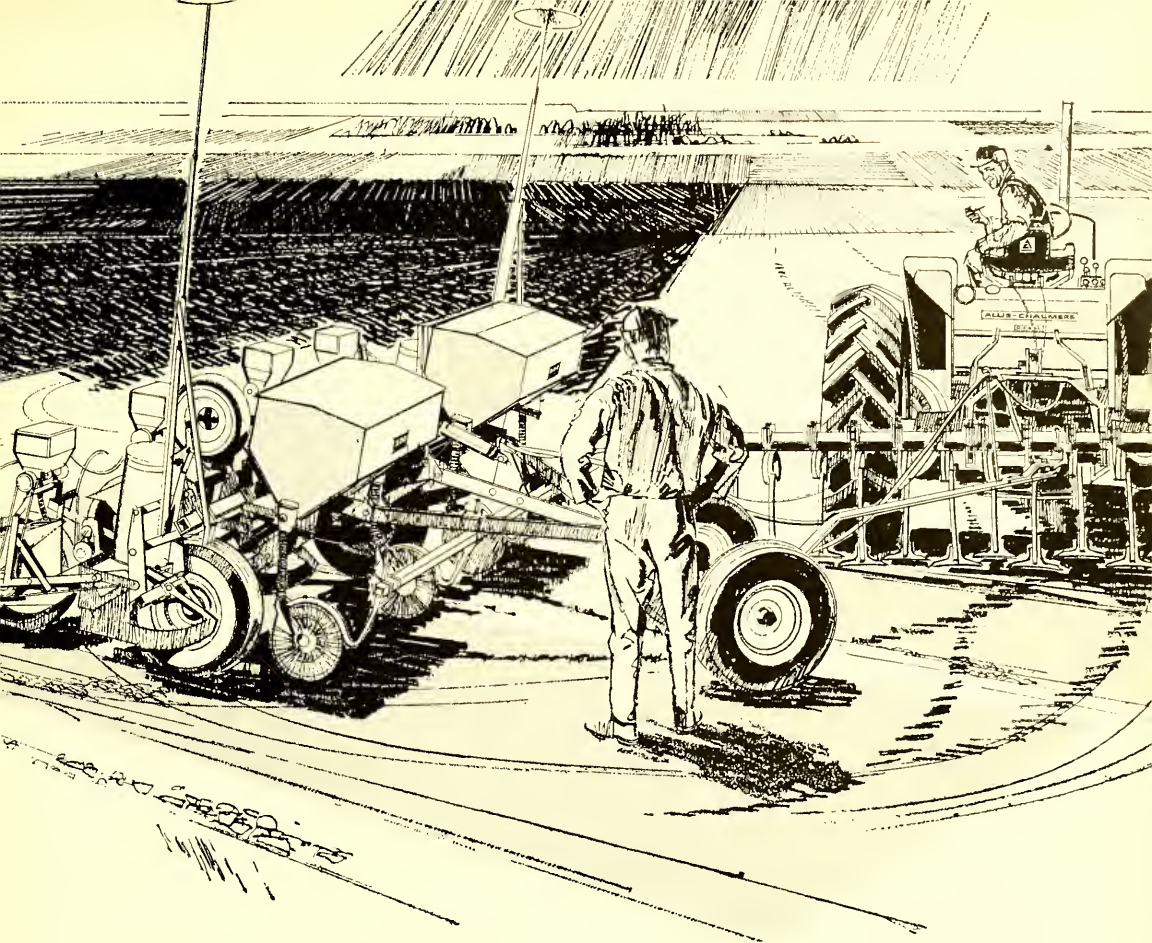
Darryl Geiger

Denver, Pennsylvania

I am planning to start a 26 months' term of overseas voluntary service beginning sometime in February. I will be helping to operate a credit union on the Bay Islands off the northern coast of Honduras. I will also be helping to set up a youth organization similar to Boy Scouts, 4-H, FFA, etc. I would like very much for my subscription to continue. I will look forward to receiving your fine magazine in Honduras.

Kenneth Martin

The National FUTURE FARMER

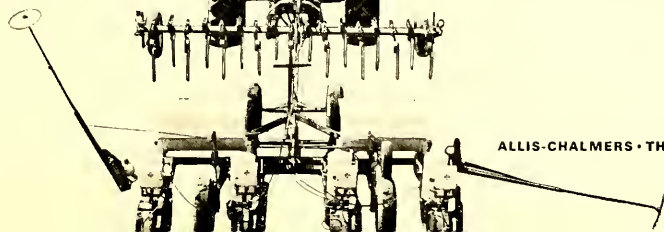


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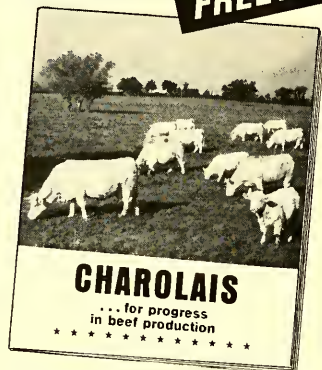


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HOUSTON, TEXAS



These are the two new award plaques for ornamental horticulture and home improvement. Send orders to Future Farmers Supply Service.



Every FFA member should set his goal to win a Foundation award. Two new awards are available.

New Foundation Awards

THIS YEAR for the first time, two separate Foundation award applications have been printed for use by FFA members, and two new awards have been made available.

One application is to be used in the technical or service areas of agriculture. The new awards are included in this application. They are ornamental horticulture and home improvement. Other awards in this area include agricultural mechanics, farm and home electrification, and soil and water management. Changes have also been made in these awards to reflect more emphasis on achievements in the specific award field.

The other application is designed for use in the area of production agriculture. These include dairy farming, livestock farming, crop farming, poultry farming, and forestry.

Also new for 1966 is a broadened award base so that every state may submit to the national office any or all of the top individuals in these areas.

Each FFA member might well set his goal to win one of the national FFA Foundation awards. More than 70,000 members receive one of these awards each year. Most of these are in the form of medals given on a local chapter basis. Each local winner becomes a potential candidate for national honors and cash awards. In addition to the production agriculture and technical agriculture awards, the Foundation also provides chapter medals for Star Chapter Farmer, farm safety, FFA public speaking, and Star Green Hand.

A congratulations booklet provided for each recipient adds prestige to medals given chapter award winners. It contains a message of congratulations from the national FFA president and the chairman of the Foundation Sponsoring Committee. The back page of the booklet is in the form of a certificate, which is filled out by the local advisor to provide a lasting memento of the award that can be displayed in the home.

The National FUTURE FARMER

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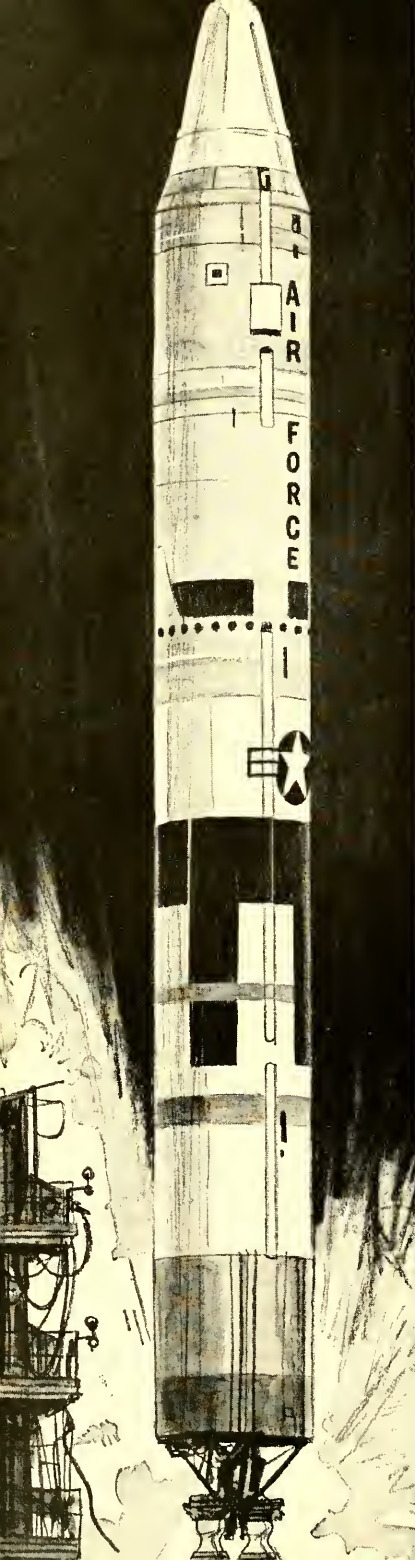
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"May We Accomplish Our Purpose"

RECOGNIZE THE words in the title? They are stated by your president at the end of the opening ceremony at each FFA meeting. You have probably heard them so many times that you may not give much thought to what they mean.

What purpose? Did you ever ask yourself that question? What purposes do you intend to accomplish through your membership in the FFA?

After some careful thought, write down several of the purposes that you want to tackle—and master. These aren't necessarily the specific purposes you have read in the FFA manual. They should be tailor-made for you.

You can counsel with your advisor and parents on some objectives, but the final decision will have to be made by you. When you have put down in black and white what it is you want to get out of your FFA membership, think about how you are going to do it. How will you accomplish your purpose?

One word holds the key, and that word is *involvement*. Wait, don't let that \$64.00 word scare you. Basically it means to participate, to take part in your chapter's activities. But its true meaning implies more than that. Take part *wholeheartedly*; participate *enthusiastically*; become *absorbed* in chapter activities that interest you.

Let me give you an example. Future Farmers are well known for their ability to speak in public, but such talent doesn't come automatically when you pay your dues. It takes preparation, practice, and participation to succeed in public speaking.

Many FFA members do not enter public speaking events because they are afraid they are not good enough or they don't have a chance to win. Develop a *positive* attitude toward participation in FFA activities! Of course, everyone can't win. Many public speaking winners lost the first couple of times they entered, but they were able to profit from their experience and come back stronger the next year. And with a bit of "extra effort," they succeeded.

Then too, remember, it's not whether you win or lose, but in the final analysis it's how you play the game that counts. You can develop initiative and self-confidence only by trying. The real victory comes when you conquer the voice from within that says "I can't."

This leads to another point I should like to stress: volunteer for committees and similar important assignments. That's right, *volunteer*. We need willing

By
H. N. Hunsicker
National FFA Advisor



workers. America needs youth who will step forward to accept the challenge of our time. The FFA can render a valuable service to our country by training members to be equal to the task at hand, members who are not afraid to stand up and be counted when duty calls.

Those who get the most out of their FFA membership are those who put the most into it. I urge you to pitch in eagerly, exhibit some enthusiasm in your efforts—it's contagious. Accept the tasks given to you cheerfully, relish the opportunity to be of service to someone else. Strive to do a thorough job in all you undertake, but don't get too deeply tied up in only one area of interest. Work for a balanced program of participation. Choose a variety of activities that will enable you to profit from as many FFA experiences as possible.

I should like to pass on something that was told to me by some former members. They now realize, too late, what a rare opportunity they had in the FFA to take part in many exciting and rewarding activities. They had the chance but didn't use it. Now they are sorry. These folks say, "Never pass up the golden opportunities which the FFA provides. You may not always get a second chance."

One of the primary purposes of the FFA is to develop agricultural *leadership*, but leadership is not developed in a vacuum. You must become involved in your chapter's activities to gain this vital trait. This involvement begins with simple things like regular attendance at all meetings. But don't

just sit there; get on your feet; say what's on your mind. That's the way FFA can continue to be called "youth-democracy in action."

You have read in your National Magazine about the success achieved by former Future Farmers. Many now hold important positions of agricultural leadership. In the process of becoming an FFA leader, however, remember that you must first learn to be a good follower. Qualify for the leader's post by preparation, climbing the ladder a step at a time.

Right now you have a unique privilege. The FFA is establishing new awards programs on the state and national level. Because they are not as well known as some of the established ones, many FFA members may not compete in them right away. Here's your chance to get the jump on the slow starters. Ask your chapter advisor about them and make plans to be one of the first to take home the award in your school. Be a trail blazer and help get these new activities off to a good start.

One area in the FFA program that needs to be strengthened is community service. Many chapters have done much, but more remains to be done. In showing a genuine concern for the welfare and the betterment of your community, you can exert an influence that, in the words of our creed, most certainly "will hold true to the best traditions of our national life."

As you plan for your future, I advise you to stay close to agriculture. Never has this great and growing industry been so vital to the world. Seek out those who are important in the agricultural community where you live, and work with them. Try to keep up with the latest developments in agriculture. Be aware of the many career opportunities that are available to those with your background and interests.

The FFA is one of the finest organizations you will ever join. Be proud that you are a member. Identify yourself with the FFA; wear your official jacket and your degree pins when appropriate.

Read all you can about the FFA. As you read through the Official Manual, you will find many inspiring passages to guide your thinking. I think the basic message is in the FFA motto. Its four simple, direct lines challenge the best efforts of all of us. *You* are important to the FFA, for our real strength lies in the part each individual member takes in making his chapter a better one.

something new



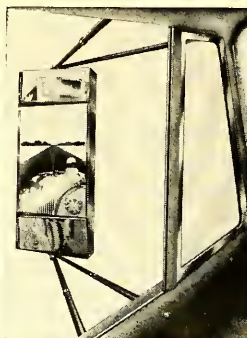
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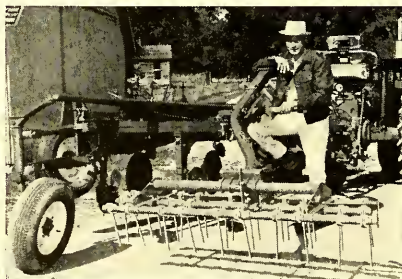
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O. Lighting the way toward correcting shotgun shooting errors is new tracer shotshell that visually pinpoints the center of a shot charge in flight. Fully effective for daytime as well as nighttime. (Winchester Western)



N. Farmer-invented mulcher for attachment to plow is shown by inventor, Sokolowski. Mulcher attachment is adjustable to each farmer's requirements. It's adjustable to compensate for plow speed, beam spacing, plow clearance, and bottom width. Other attachments available. (Noble Manufacturing)



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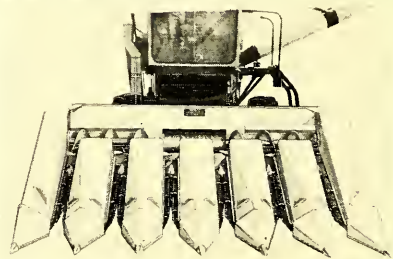
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Free detailed information is available on the above products. Send coupon to National Future Farmer, Alexandria, Virginia 22306.



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**for weed and grass
control in corn...**

A combination of LOROX™ linuron weed killer and Atrazine is the new angle for corn growers

Combinations are the answer to annual weed and grass problems that no single herbicide can solve alone. Many farmers used a combination of "Lorox" and Atrazine in 1965 and were highly pleased with the results. "Lorox" is recognized for its outstanding ability to control weeds and also for its favorable rate of disappearance from the soil. Atrazine is known for the manner in which it is tolerated by corn. This combination capitalizes on the strong points of each herbicide.

Another angle...non-pressure nitrogen solution may be substituted for all or part of the water when using the combination of "Lorox" and Atrazine. One trip through the field weeds 'n feeds your corn.

This year, use "Lorox" and Atrazine in combination. Mix them yourself or buy a ready-to-use formulation of the two—look for the bag containing linuron. Ask your dealer for more information about the combination of "Lorox" and Atrazine, or write: Du Pont, N-2539, Wilmington, Delaware 19898.

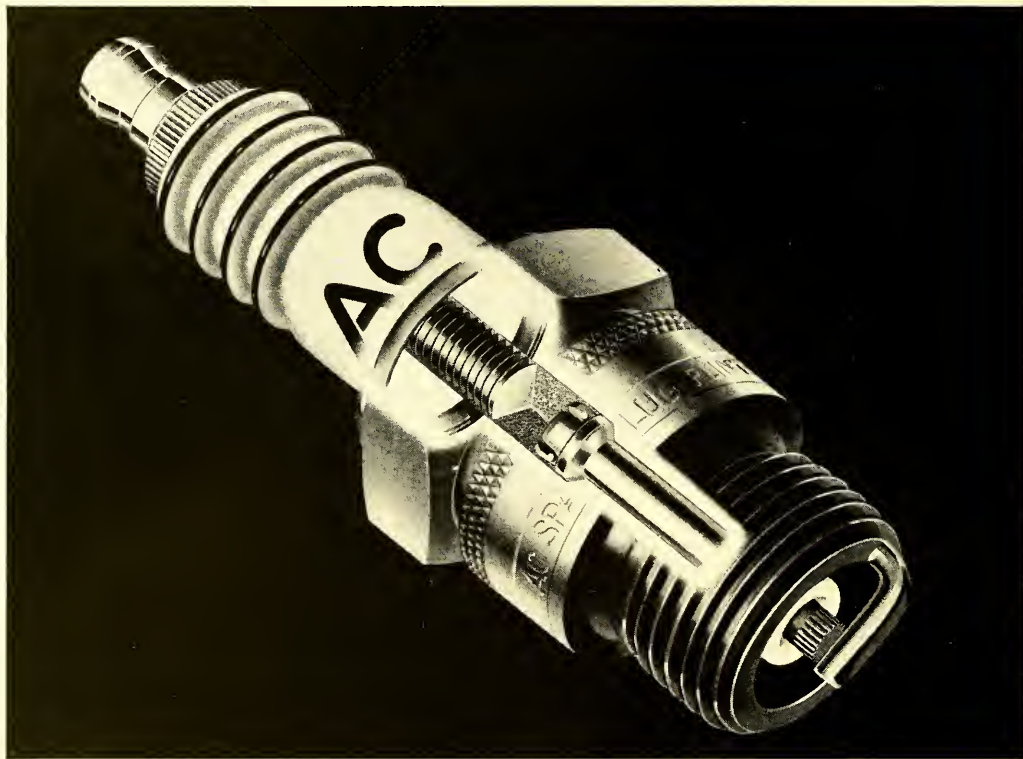
For your soybean acreage, "Lorox" used alone gives you the most weed and grass control for your money. "Lorox" effectively controls both annual weeds and grasses in soybeans, at low cost and without soil residue problems.

With any chemical, follow labeling instructions and warnings carefully.

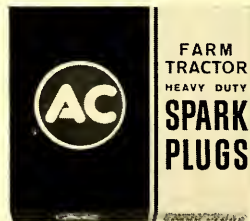


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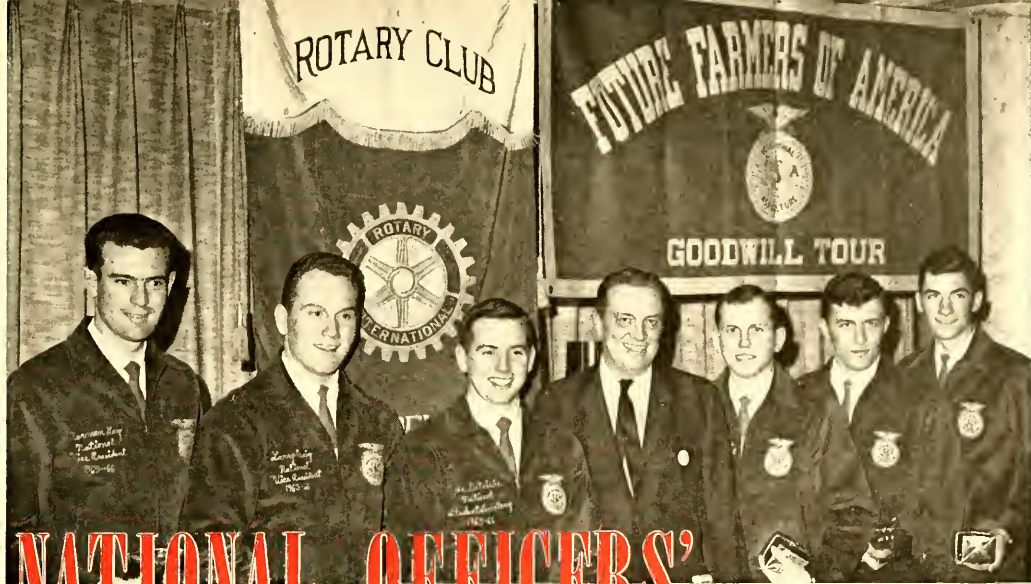
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specify AC Spark Plugs with
positive sealed protection against
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AC Farm Tractor Heavy-Duty Spark Plugs are positively sealed against combustion gas leakage. The fused metal-glass inner seal prevents leakage of combustion gases past the center electrode. The extruded internal gasket prevents combustion gases from escaping between insulator and shell. As a result, there is no loss of engine power due to loss of compression. This helps assure you of maximum engine performance even under severe operating conditions. AC's positive sealing also promotes unsurpassed heat range stability, guards against overheating and pre-ignition. Gain the benefits of AC's positive-seal design. Specify AC Farm Tractor Heavy-Duty Spark Plugs . . . available in the convenient AC 4-Pac wherever AC products are sold.



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1966 Goodwill Tour

Your leaders visited 16 major cities on month-long tour.

PICTURE YOURSELF in 16 of America's biggest cities discussing farm problems with major industrial leaders.

If you can imagine yourself in these situations, you will have a pretty good idea of what Goodwill Tour '66 was like. Of course, you would need to throw in a blizzard, dozens of speeches, and an occasional lack of sleep to keep the picture in proper focus.

Goodwill Tour '66 was to have slipped into high gear on January 30 at Richmond, Virginia, but got stuck in the snow instead. A major blizzard moved across the East Coast, and it was February 2 before the national officers got the tour back on the road in Philadelphia.

From Philadelphia the trip took the officers to such cities as New York, Pittsburgh, Akron, Detroit, Racine,

Byron J. Nichols, chairman of the Sponsoring Committee for the FFA Foundation, joined the national FFA officers in Philadelphia for a Rotary Club luncheon held in cooperation with the Delaware Valley FFA Sponsoring Committee.

The national officers made Johnson Wax one of their stops on the 50,000-mile Goodwill Tour. Nancy Larsen, secretary, public relations, was tour hostess.



Milwaukee, Moline, Chicago, Peoria, Bloomington, Quincy, St. Louis, San Francisco, and Los Angeles. In these cities the officers visited with nearly 80 donor companies to the Future Farmers of America Foundation, spoke to civic, business, and economic organizations, and carried the FFA Week theme to press, radio, and television.

An example of the first-class arrangements made for the officers during the tour occurred in Bloomington. Moorman Manufacturing Company arrived with their private fleet of company planes to take the officers to Quincy, Illinois. Here the company had planned a "Blue Jacket Day" by arranging for 300 Future Farmers from three states to have the opportunity to visit with the FFA officers and take part in a leadership program.

"What do the national officers say about the importance of farming and the FFA?" you ask. In Philadelphia your national leaders spoke to the Rotary Club. *The National FUTURE FARMER* was there and recorded these remarks to answer that question. Listen, Joe Detrixhe, national FFA student secretary, is speaking: "In the

(Continued on Next Page)



Officers watch a dyeing demonstration at Geigy Chemical Corporation.

New Jersey Advisor George Lange and President Howard Williams are flanked by Campbell Soup officials.

The FFA'ers visited with Pfizer executives at Pfizer World Headquarters.



NATIONAL OFFICERS 1966 Goodwill Tour

(Continued)

last analysis, men's minds follow their stomachs; the 'big stick' we carry in the future may not be a super bomb but rather a super agriculture. We must become increasingly mindful that, as Senator Dirksen said, 'Freedom, peace, and hunger cannot co-exist.' How did the United States become the free world's agricultural champion?" Detrixhe asked his audience. "Education is the first answer. Some 9,100 high schools in the U. S. offer instruction in vocational agriculture, and the land-grant universities emphasize advanced agricultural training. These graduates have astounded the hungry world by creating an 'agriculture that is more than farming.'"

Later that same week, in a city noted for its skyscrapers and visionary men, Vice President Larry Craig told the New York Farm Club of the need for leadership training like that provided by the FFA. He quoted Secretary of Health, Education, and Welfare John Gardner, who warned of a leadership crisis resulting from "a growing belief that the world of the future 'does not need leaders, only experts. The best students are carefully schooled to avoid leadership responsibilities. . . . Over 450,000 young men now receive leadership training as

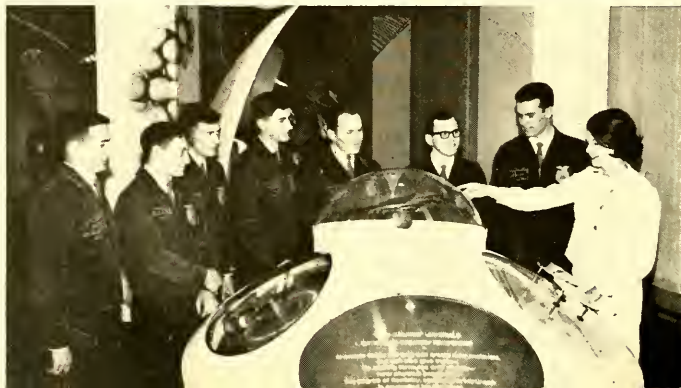
FFA members," Craig advised. "From the reserve of leaders trained the FFA way have come congressmen, governors, state legislators, business executives, and educators. The potential of the FFA for developing leadership and meeting the very real need cited by Secretary Gardner grows continually," he added.

These examples are only two "quick takes" from a dizzy pace of talks and personal discussions that your national officers will have from coast to coast. They do, however, point up what National President Howard Williams calls "our basic purpose" for the tour. He explains, "We want to tell FFA friends in business and industry what vocational education in agriculture and the Future Farmers of America is doing to provide training and leadership for young men with farm backgrounds so that they can find their place in an agriculture that is more than farming. It includes production, processing, distribution, and servicing."

As the FFA Goodwill Tour nears its twentieth birthday, its message has never seemed more vital. The world population is getting younger and hungrier. On Goodwill Tour '66 your national FFA officers left impressions that will give new meaning and a better understanding to both these vital topics—youth and agriculture.

The National FUTURE FARMER

At the world's busiest crossroad, the officers toured the exhibit center of the Allied Chemical Tower. Hostess explains new horizons in man-created materials.



MAKES MONEY FROM TREES



Cut wisely is a key to forest management. This damaged tree will be cut.



Bernard and his mother own this saw. He is cutting this tree for stave bolts.

**The national proficiency winner in farm forestry
tells how he won and makes money from his trees.**

BERNARD MEYER operates a 121-acre family farm at Perryville, Missouri. His farm includes a small timber area of a little over 35 acres, but unlike many small farm forest owners, he makes money from his trees.

Active concern and responsibility are not new traits to young Meyer, who captured the 1965 National FFA Foundation award for proficiency in farm forestry. For you see, Bernard is the breadwinner in the Meyer family. He explains, "My father died about ten years ago. Now I have taken over, and with the help of my younger brothers, I am farming all the crop and timber land. At the present time I am supporting my mother, sister, and two brothers."

A New Beginning

Believing that trees are a profitable

and renewable crop, Bernard has managed his timber acreage to increase the farm income. He has succeeded in bringing his timber stand to "financial maturity" by taking these steps: (1) planting desired species, (2) selective thinning, and (3) knowledgeable marketing. It adds up to an award-winning program of continuous production and profit.

Bernard found the most practical method for renewing his forest area was planting nursery-grown seedlings. He explains, "For the past five years I have been replacing all the timber I cut with pine tree seedlings which I get through the FFA chapter from the Missouri Conservation Commission." Generally Future Farmers can purchase these seedlings from a state forest service or conservation commission at a cost of \$4.00 to \$5.00 per thousand. Spacing of planted pines

usually ranges from six by eight feet to six by ten feet apart, depending on the soil and other conditions.

Young Meyer has planted more than 9,000 seedlings in the last five years and plans to plant 2,000 Christmas tree seedlings.

Planting machines are available in many localities which can plant up to 8,000 seedlings per day, but Meyer found the hand method best for his situation. "I use a shovel to open up a hole and set the trees. This takes quite a bit of time, but it is the only way to set out trees in woods where you can't get through with tree planting equipment. I have been using mostly short leaf pine trees but have set out some hard and soft woods, such as oak, walnut, and tulip poplar," he explained.

Selective Thinning

Bernard has discovered that selective thinning is man's way of aiding nature . . . and his pocketbook. "I have learned how to select timber that needs to be cut by studying vocational agriculture and by talking to the farm forester in our area. I have been very selective in cutting our timber. I cut only mature trees or those that are dying or injured in some way. I have also learned a great deal about harvesting by working for a neighbor who operates a sawmill," Bernard explains.

Based on his own experience, Bernard recommends these precautions for a thinning program:

1. Consult your ag teacher or forester before marking trees to be cut.
2. Be sure there is a current market for your wood.

(Continued on Page 58)

Meyer is planting pine trees on farm land unfit for growing other crops.



This is a small wood saw Meyer built. Tree tops are used for fireplace wood.





THINK BIG BUILD BIG WIN BIG

Photos by Bob McCaffree

It takes a big machine to do a big job. This 60-foot land plane (top photo) was designed by Clyde Keller and his FFA advisor. It enables Clyde to save water and improve crop production. Clyde also built the heavy-duty cattle squeeze chute in the Sterling farm shop to help increase his livestock efficiency. It won Grand Champion at the Colorado State Fair. The bright red paint on John Knaub's corn wagon (bottom photo) is new, but that's all because the wagon was constructed entirely from used material. It won first place at the state fair.

Here are the projects and the FFA'ers behind Sterling, Colorado's, winning shop program.

By
Douglas Bishop

STERLING, COLORADO's, inventive Future Farmers have captured about every farm mechanics title in their state with equipment built to fit the exacting needs of farming this big country.

Every member has participated in the chapter's winning program, which has led to three consecutive state farm mechanics championships. Many of the winning projects are planned six months to a year in advance. Numerous drawings and, in some cases, building of scale models are completed before project construction begins.

Because time is at a premium, one night a week is set aside for shop work, and dads are invited as consultants. In addition, many Future Farmers spend some of their weekends and holidays working in the shop. With dads interested and involved, enthusiasm sprouts and grows. It also builds efficiency and workmanship into every project.

A desire to develop an efficient implement prompted Clyde Keller to build a 60-foot land plane to level fields before planting. A factory unit of equal size and quality would cost over \$1,500, but Clyde's materials came to only \$450. Clyde operates a 560-acre irrigated farm in partnership with his father, and his machine is adapted to their farm's particular needs.

It was a proud day for Clyde when

his plane was judged the champion project at the Colorado State Fair. He also received a fifth place national rating in the Lincoln Arc Welding Contest. Clyde, like other chapter members, wasn't satisfied with one project. Since 500 head of cattle are handled annually on their farm, he saw a need for a heavy-duty cattle squeeze chute. The chute was built, shown, and, like his plane, won champion honors.

Jim Kester, a 1965 graduate who farms with his dad, realized the need for stubble mulching on their wheat farm. Stubble mulching is a method of leaving crop residue on top of the ground and using sub-surface tillage in a summer fallow program. The residue prevents wind and water erosion. With some old oil-well pipe, an old combine frame, and some used parts from another plow, Jim was on his way to completing a 15-foot flexible stubble mulching sweep plow. Jim's dad is still bragging about the performance of the plow and the \$600 savings. The built-in quality of the plow earned champion awards at every show in which it was entered.

A winning project starts with a good idea. Russ Penfold had just such an idea when he began planning a motor-driven, self-propelled hay buck rake. Russ felt such a machine would free a tractor for other uses, speed up haying, and reduce costs. To his idea, Russ

added an old pickup chassis, a 1954 car motor, an old hay sweep, and a lot of hard work. Was the \$150 a good investment? George Penfold, Russ's dad, thinks so because haying time has been cut by one-third.

On another farm a few miles away, John Knaub needed a corn wagon to fit his dad's corn picker. To keep cost down, John used old car spindles, an antique manure spreader, old pipe and other used materials. The project took a year's shop time, but John has a corn wagon of professional quality at a substantial savings. Within his division, John's wagon has never been beaten in shop competition.

The Sterling Chapter takes pride in displaying their projects. National FFA Week provides such an opportunity. Called "Dad's Night," the program is fast becoming a community night. A Rocky Mountain oyster fry starts the evening, followed by a tour and explanation of projects under construction. Public acceptance of the mechanics program has been advanced by inviting local businessmen.

An outstanding project completed during any week throughout the year is displayed by a large "Farm Mechanics Project of the Week" sign outside the ag building. In addition to newspaper publicity, many motorists stop to examine the projects.

A spring FFA show provides a final opportunity to display what the Future Farmers have constructed. Members are then ready to exhibit their projects at the Colorado State Fair. The objective of all this activity is to encourage projects which will increase agricultural efficiency.

It asks Future Farmers to think big and build big for a chance to win big. But winning big, which they have, is only the beginning of the dividends they receive from the skills and knowledge learned in farm mechanics.

Sterling Future Farmer Jim Kester saved \$600 by building this 15-foot stubble mulching sweep plow in shop.



Russ Penfold enjoys bucking hay with this motorized hay rake equipped with bucket seats and four on the floor.



1780



1880



1980

THE
THREE “M”
ERA OF AGRICULTURE



MACHINERY—MANAGEMENT—

FARMING IN the next decade will be a challenging occupation. The agricultural revolution is swelling and cannot be reversed. There have been many forecasts recently about various aspects of agriculture in 1980. *The National FUTURE FARMER* has put them together to see what, in total, they tell about your farming future.

When it comes to forecasts, doubting Thomases should consider what Lester S. Kellogg, director of economic research, Deere and Company, recently told a panel on agribusiness in Denver. He said that it's better to overestimate potentials than to underestimate them. In this context, he quoted from the record of the court-martial of Brigadier General Billy Mitchell. In 1925 General Billy Mitchell was court-martialed for criticizing his superiors' failure to see the future of air development. Here are sample questions put to him and his answers:

“Prosecutor: ‘You say that in future wars soldiers will invade by leaping in parachutes from airplanes. Would you care to reveal who gave you this startling information?’

“Mitchell: ‘Nobody gave it to me. It's quite obvious to anyone with the slightest foresight.’

“Prosecutor: ‘You say that airships traveling 1,000 miles an hour will fight each other in the stratosphere. Have you any comprehension how fast 1,000 miles an hour is? Do you know that it is faster than the speed of sound?’

“Mitchell: ‘Approximately 250 miles faster.’

“The consequences of treating lightly General Mitchell's forecast have been great.”

Before leaving for tomorrow, let's see where the agricultural revolution is at this moment. Don Paarlberg of Purdue University notes these key factors which may help put the future in focus.

1. Population—7 percent of the U. S. population on farms now; 25 percent before World War II.

2. Number of farms—5.6 million in 1950; about 3.3 million today.

3. People fed per farm worker—31 today (twice as many as 15 years ago).

4. Yield of corn in the U. S.—72 bushels per acre in 1965; 20 years ago it was 33 bushels.

By 1980 agriculture will have a vast new international dimension. It is best illustrated by this country's recent experience when soybean supplies were depleted before the new crop was ready for harvest. The reason was that U. S. farmers were committed to supply major import needs for food deficit regions of the world. Dr. Louis M. Thompson, associate dean at Iowa State University, says the United States will need to utilize every available acre of crop land by 1980 because of growing demand for grain crops in the world market.

WHAT TO EXPECT

This new dimension will cause a domino-like reaction which will be felt throughout agriculture. Here's what Thompson says you can expect:

As export demands for corn and soybeans continue to

The National FUTURE FARMER



By Len Richardson

METHODOLOGY

grow and farmers are permitted to put all their crop land in production of these crops, grain prices will rise in world markets. If man consumes more soybeans and grain directly, pork will become a luxury because of the dependence of hogs on soybean protein and grain. Hog numbers will probably increase during the next three years, then decline to lower levels than at present.

Because beef cattle can utilize corn stalk residues (or preferably corn silage), you can expect beef cattle numbers to continue their upward trend. Beef cattle numbers have doubled in the U. S. since World War II.

Dairy cattle numbers may decline slightly but should level off, then trend back by 1980.

Poultry must compete with man for grains just as swine, but the efficiency in conversion of grain to animal protein by poultry should cause further increase in production of poultry products in this country as our population continues to grow.

Consider corn and cotton, two of our most important crops. Good corn farmers today produce corn with only two hours of labor per acre, and by 1980 this will be reduced to 1.3 hours, with anticipated yields of 180 bushels. Labor required per 100 bushels will be about 45 minutes compared to 1½ hours today, according to Dr. Lynn S. Fife, agricultural economist with International Harvester.

This will be accomplished by combining tillage operations, elimination of most, if not all, cultivation, narrow-row corn, four- and eight-row equipment, and large fields.

By 1980 Fife says top cotton farmers likely will be able to produce an acre of cotton with only two hours of labor. This will be accomplished by combining some operations and eliminating others. Where it now requires 20 to 25 operations over the field during a year to produce and harvest two to 2½ bales of cotton per acre, in 1980 this will be accomplished in only eight to ten operations with yields possibly twice as high.

Power and machinery: Looking ahead 15 years, Fife says you can expect a continued increase in the size of tractors. The average horsepower used per farm worker will likely increase by 60 percent. Gas turbine engines present a real possibility as a source of farm power. A likely example would include electronic controls and furrow sensing guides. Nuclear engines are another possibility. Such engines could be fueled at the factory and run the life of the machine.

Land preparation is undergoing the most radical change of any phase of farming. It is likely to be changed considerably by 1980. Fife says we may be using controlled vibrations to energize the cutting edges of plows, for example. Compressed air may clean and reduce drag on tillage equipment. The amount of tillage will be reduced substantially, thus reducing cost and soil compaction. Equipment that will operate more efficiently on large, even rectangular-shaped fields will be introduced. This will mean gradual consolidation of farms into larger and larger units.

(Continued on Page 56)

Grow Contest Corn Like the Champions

RECORDS ARE made to be broken, but while shooting for records, keep in mind that profit per acre is more important than yield. When "shooting for the moon," you should realize, as one corn man said recently, "If things are right, you get double. If things go wrong, you may get nothing . . . or at least small returns for your big investment."

There can be no doubt, however, that high acre yields are a base upon

Want to grow 300-bushel corn? Here's the prescription used by Future Farmer corn yield champions. A guide for you.



Dan Ganske, Beaver Dam, Wisconsin, tried to break the record by shifting to 20-inch rows and planting thickly.

which profitable farming can be built.

You can't help noticing that corn records are being set down South, namely, in Mississippi. What's the reason? That's a loaded question, but climate must be part of the answer. Based on light analysis studies he has made, Dr. Bob Shaw, an expert in climatology, says that 200-bushel corn in the Corn Belt may be an achievement equal to 300 bushels in the deep South. Whatever the reason, the South holds the record with Corn Belt Future Farmers right behind and getting closer. Bob Armstrong, an Illinois Future Farmer, produced 263.6 bushels in 1965, which equals the yield produced by Jackie Courson, a Mississippi FFA'er in 1964. Billie Jarvis of Preston, Mississippi, obtained a 1965 yield of 271.5 bushels, which about equals the 271.98 bushels set by the Grand Valley, Iowa, FFA Chapter. That was the highest yield ever harvested in the Corn Belt. To prove the Corn Belt is still very much in this "ball game," take note of the fact that an adult farmer in Missouri topped 300 bushels in 1965.

The *National FUTURE FARMER* has collected the stories of how recent champions obtained their high yields. This group includes Future Farmers Don Ganske, Beaver Dam, Wisconsin; Bob Armstrong, Jacksonville, Illinois; Billie Jarvis, Preston, Mississippi; and Jackie Courson, Hickory Flat, Mississippi. To round out the group, we included Edwin Banwart, Mediapolis, Iowa, an adult farmer who won the 1965 Iowa Corn Growers Contest. Their methods point to the following principles for growing contest corn:

1. Find the right field and plant early. The three highest yields in the champion group were obtained by members who planted their corn the earliest . . . by May 1. This is in line with what agronomists have been saying about the advantages of getting corn planted before May 15. These include higher yields, safer maturity, less second-brood corn borer damage, shorter plant height, and less chance of rootworm attack.

Finding the right field may be your most important assignment. Some of the contestants didn't make specific comments on field selection, but here are a few conclusions. Find a field that is fully recharged with moisture. You can judge your own subsoil moisture by digging post holes or checking the fall and spring surveys published by your state college. Two of the champions helped to build their moisture reserve by selecting pasture ground for their corn and plowing it under in the fall. This way they kept the crop from using fall rains needed to build subsoil moisture. A silt

(Continued on Page 46)

Greatest profit from investment in fertilizer was returned from high fertility corn plots when the corn population averaged around 24,000 plants per acre.





Sponsoring these activities helped to win White House visit (above photo).

Power in the Past

PARTICIPATION IN a statewide American Heritage project has reminded McLeansboro, Illinois, Future Farmers that there is power in the past. As a result of their active effort to call attention to America's rich past, the Future Farmers won an all-expense-paid trip to visit the very cradle of liberty.

The trip was awarded for winning first place in the American Heritage program sponsored by the Illinois Agricultural Association. The first stop on the trip was a tour of Gettysburg. Two days were spent touring Washington, D. C., where the White House, Capitol, Washington Monument, Jefferson Memorial, Mount Vernon, and the famous Lincoln Memorial were visited.

Permission was also granted for the FFA members to place a wreath on the grave of John F. Kennedy. On the fourth of July, the FFA'ers toured Philadelphia's Independence Hall where the Declaration of Independence was signed. Final stop on the tour was the New York World's Fair.

Back home again, the Future Farmers agreed that a tour provides an absorbing and fascinating way to study history, for history is human and real,

for real persons have been the actors on the stage of the past.

Mr. William J. Brinkley, McLeansboro advisor, explained why the trip was won: "The boys worked long and hard in an attempt to put over the heritage idea to the community of Hamilton County and surrounding area."

Their program was highlighted by historical displays, window displays, matching board displays, group meetings, parades, signboards, meetings with service clubs, naming of a man of the year, furnishing speakers, and special classroom studies.

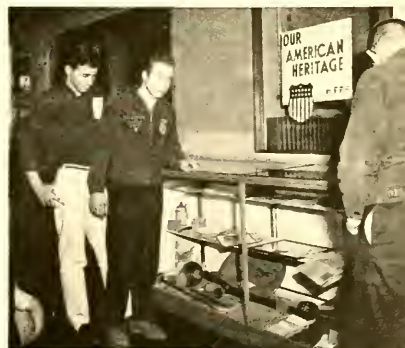
"We have entered our application in the Freedoms Award Foundation contest," added Mr. Brinkley. One indication of the amount of work that has gone into the program is indicated by the fact that the Future Farmers have insured their application for \$4,500.

(Editor's Note: At press time The National FUTURE FARMER learned that the McLeansboro community program was awarded a George Washington Honor Medal by the Freedoms Foundation at Valley Forge.)



As part of their program, they named Editor Kirkpatrick "Man of the Year."

Relics of early Illinois history were obtained for display in school library.

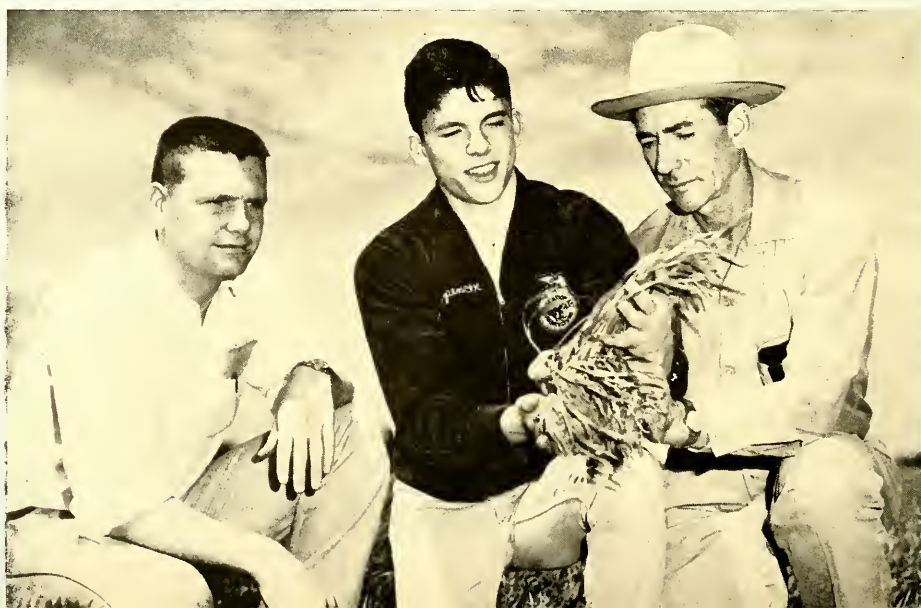




Giving some alfalfa the "twist" test, Joe determines it is ready for baling.



In developing his year-round profitable crop farming program, Joe has looked to his vocational agriculture teacher, left, and his father on the right. To expand, he recently purchased an 80-acre farm from his father.



Crop farming

is my livelihood!

By

Joe Spencer

Editor's Note: Instead of our writing a story about Joe Spencer, 1965 national winner of the FFA Foundation award in crop farming, here's Joe's story, told in his own words.

CROP FARMING is the livelihood of my family and my community. All of my life I have lived on a 160-acre farm, 21 miles northwest of Anadarko, Oklahoma, our county seat.

My parents, who were both school teachers, purchased our home farm in 1942. In 1951 they bought another 160-acre farm. They bought 80 acres in 1956, which was later sold to the government to be used in the Fort Cobb Lake reservoir. Using the money from the sale of this land, Dad bought another 80 acres, which adjoins the land purchased in 1951. Of the 400 acres we own, 272 acres is in cultivation; the remaining acres are in improved pastures.

My parents have cooperated in all my farming and livestock operations. Mother was vice president of the FFA Mothers' Club two years and is a member of the Oklahoma Cow Belles. Dad is an honorary FFA member of our chapter, and he is on the Board of Supervisors of the Caddo County Peanut Growers' Association and on the

This water pump cost Joe a lot of money, but he hopes it will boost yields.



Board of Directors of the Caddo County Farm Bureau.

Before I entered high school, my sister and I moved pipe during the summer to earn enough money for me to buy five registered Polled Hereford heifers to start my vocational agriculture program.

My first year in high school, I farmed 22 acres of cotton with a share-crop agreement with my father. I furnished all the labor and one-half of the expense; my father furnished the land, machinery, and one-half of the expense. The income was divided equally between us.

As my desire and love for farming increased, the crop enterprise was expanded the following year to 23 acres of cotton, 5.5 acres of maize, and 10 acres of wheat. This broadened my knowledge of soils, fertilizers, and farming in general. The profits were always used to expand my livestock or crop enterprise. The wheat furnished pasture in the winter, and the milo furnished grain for supplementary feeding.

As a sophomore, I added 2.4 acres of peanuts, 19.5 acres of maize, and 4 acres of cotton to my crop enterprise. Peanuts provide the principal source of income for my family and community. I learned soil conservation, soil testing, and utilization of fertilizer and insecticides. My vocational agriculture instructor, Franklin Stehno, and my father taught me strip cropping, contour farming, and crop rotation, all of which I practiced on my crop projects. Crop residue and stubble mulching practices reduced soil erosion and increased soil humus. The use of fertilizers paid back several times the initial cost.

As a senior in high school, I began to look forward to a future in farming. I sharecropped 16 acres of cotton, 5 acres of peanuts, 7 acres of milo, 10 acres of wheat, 40 acres of alfalfa, 15 acres of oats, and 20 acres of hay-grazer. To expand my projects further,

I purchased an 80-acre dryland farm from my father for \$11,000 at 5 percent interest to be paid in yearly installments until the obligation is fulfilled. To improve this farm, I drilled an irrigation well during the summer which produced 600 gallons per minute. This increased crop yield during the usual hot and dry summer months.

In cooperation with DeKalb and Golden Aeres, I planted a five-acre milo test plot. On this test ground the plots were each farmed differently. Several different fertilizer levels were used. The plot averaged 92 bushels per acre with the control plot, which received no fertilizer, yielding only 61 bushels.

As a sophomore, I was a winner in our county and second in the district in the bankers' division of the speech contest and received the speech foundation award for the year. At the close of the school year, 1963, Mr. Stehno, my advisor, and I accompanied the state FFA delegation on a People-to-People tour of Europe.

During my four years in high school, I have been on the honor roll each year, have received awards from my school for citizenship, scholarship, and athletics, and last year was presented the crops award from our chapter.

Crops from my farm have been exhibited at many of the local and state fairs. High lights of these exhibits are Grand Champion for ten heads of milo, Tulsa; Reserve Grand Champion Native Grass, Tulsa; Champion Grain Sorghum, Tulsa; Reserve Champion Native Grass, Tulsa; and four first placings in FFA crops.

Plans have been made for my crop farming enterprise so that I may go to college and still pay the installment due each year on my farm. I plan to study animal husbandry, crops and soils, and agriculture economics. When I graduate, I feel I can rent additional acres to go with the 80 acres that I am buying and be properly trained and equipped to be a successful farmer.

What to look for in CATTLE SALES CONTRACTS



Guide lines to help you make the best cattle deals.

SUPPOSE YOU have two offers for your 400-pound steers. One buyer will pay you \$24.00 per hundredweight at the farm while the other buyer offers \$25.00 per hundredweight delivered with a "standard 4 percent shrink." Which deal would you take?

If you decided on the \$25.00 offer, there is a good chance you would lose on the deal. Here's why: Each offer will net you \$96.00 per head since the \$24.00 per hundredweight at the farm is the same as the \$25.00 per hundredweight delivered with a 4 percent shrink. But here's the bind. The cattle you sold with a "pencil shrink" will probably be weighed early in the morning after an overnight stand, thus giving the buyer the advantage of two shrinkages in weight.

It adds up to this: Selling cattle can be pretty sticky business. A properly drawn sales contract is valuable price insurance for you and the buyer.

R. Wayne Robinson, economist, and Ed Duren, livestock agent, at the University of Idaho's Agricultural Extension Service have outlined essential points that should be included in a contract. This is what they say:

Legal Aspects

A cattle sales contract is a written, legal agreement between two or more persons. It should contain in detail all terms and conditions of the sale. Cattle sales contracts are enforceable by law. It is highly advisable to seek legal counsel in drafting one.

A breach of contract, or failure to perform essential obligations, may result in an assessment of damages. In the event of disagreement, an unbiased individual should be selected by both parties to arbitrate differences. Terms of the arbitration should be precise.

Description of Animals

A clear and distinct descrip-

tion should be written in the contract. This includes number, breed, age, sex, and identification. Identification may be ear crop, wattle, brand, color pattern, or tag. Cattle should be delivered free of contagious disease, unsoundness, and injury. They must be inspected by a licensed veterinarian prior to shipment. Unusual health conditions should be listed. The contract should specify the number of cattle which may be held back and why, for example, the number of breeding heifers retained for brood cows.

Payment Conditions

You must furnish a clear title on livestock delivered. If there is a mortgage on the cattle, the contract must contain a waiver signed by the lien holder. The waiver clause should be signed by both a witness and mortgagee.

On the day of agreement, a deposit should be provided the seller. A sizable financial deposit prevents the use of contracts as mere options to purchase for speculative purposes with no intention to accept cattle delivery. Studies suggest a minimum of 15 percent down payment. The contract should indicate the balance to be paid at time of delivery and may designate a bank from which payment is to be made. You should reserve the right to retain the deposit as damages in the event the buyer refuses to accept delivery.

Delivery Conditions

The sale price should be agreed on in terms of a price per pound, per hundredweight, or per head for each lot of cattle. This should be listed in accordance with the number and description for the lot. Delivery date and location are to be agreed on by you and the buyer. If delivery date and location are not at the farm, transportation responsibility to a given location for weighing should be listed. It should

Essential Contract Items

- Date of contract.
- Names and addresses of both parties to the contract.
- Amount of deposit to bind both parties to the contracts and to insure performance of provisions included.
- Seller must guarantee a clear title.
- Livestock should be clearly described in terms both parties can understand.
- The contract should clearly indicate (a) that this is a price per pound, per hundredweight, or per head; (b) delivery date or dates; (c) place of delivery and weight; and (d) method of calculating shrinkage.
- Who is to select livestock for shipment (buyer or seller) and who bears the cost of further feeding if livestock is not accepted on specified delivery date.
- Causes that seller may use for withholding certain livestock and a limitation on the number of percentage of livestock that may be rejected for all causes by the buyer.
- Balance of purchase money to be paid at time of delivery. (The seller should be permitted to hold deposits as liquidated damages if the buyer refuses to accept delivery of livestock as specified in the contract.)
- Provision should be made for arbitration after consultation with counsel.
- The contract must (a) be signed by both buyer and seller and (b) contain a waiver from the lien holder if there is a mortgage on the livestock. It may indicate a bank from which the funds for the purchase of the livestock are payable.
- Does buyer have authorization to act as agent for the company he claims to represent? Unless the buyer is an authorized agent, the company will probably have no liability for his acts, and your recourse is limited to the buyer's individual financial ability.
- At least two copies should be made so buyer and seller may have identical copies.

also specify who assumes any additional handling and feeding costs. It's your responsibility to provide a brand and health certification to the buyer on the day of delivery.

Weighing Condition and Shrinkage

Cattle should be weighed on a state-licensed scale by a bonded weigh master. Shrinkage amount, condition, and method of calculation must be listed. Further, you must agree on who will assume weighing expenses. If you pay these expenses, allow for them in quoting prices at the farm.

Remember that no standard contract will fit all cases. For this reason, it is to the interest of you and the buyer to seek legal aid in drafting a sales contract.

**What 26 soybean growers
proved about weeds, weed
control and soybean yields**



Soybean Field Report

These growers proved to themselves

Treflan® pays off in soybean weed control

How much can weeds cut yields? Do soybean weed killers pay for themselves? These questions were answered for several dozen soybean growers who set up tests before planting last spring and completed them at harvest last fall.

Background on the tests

Side-by-side tests were set up in nearly every major soybean producing state in the country.

The idea: to let growers prove to themselves that a dependable weed killer can pay off, when used properly

under widely varying field conditions. In each test, part of an acreage was treated with Treflan before planting and part was untreated. Treflan was broadcast applied in all tests except one. All broadcast applications were incorporated with a disc.

Growers handled all the beans normally during the season. At harvest, the beans from each portion of the test were weighed to get accurate yields. In determining costs and returns the following figures were used: Soybeans were valued at \$2.40 a bushel, soil incorporation costs at \$1.50 an acre, rotary hoeing at \$.75 an acre, and cultivation at \$1.25 an acre.

Results indicated that uncontrolled weeds cut yields in half

Three growers (in Indiana, Missouri, and North Carolina) just let the weeds go to see how much they'd reduce yields. Weeds dropped yields from an average of 43.1 bushels per acre on Treflan-treated plots to 20.4—a reduction of 22.7 bushels or nearly 53%! These were mixed weeds, but foxtail and other grasses and pigweeds were the main culprits.

Treflan paid back \$2.95 per \$ spent in all tests

Per acre averages	
Value of extra bushels	\$20.88
Avg. cost of Treflan/A	7.08
Return/\$ spent	2.95

While the average return reported by all growers was \$2.95 per dollar invested, Treflan may return you more or less than this, depending on weed species and problems.

Treflan-treated beans returned an extra \$12.43 over cultivation only

(summary of 19 comparisons)

Per acre averages	Treflan weed control	Cultivation only
Yield, bu./A	34.3	26.3
Yield increase	8.0 bu.	
Crop value @ \$2.40 per bu.	\$82.32	\$63.12
Weed control costs	10.94	4.17
Crop value over weed control costs	71.38	58.95
Extra return/A	\$12.43	

In these tests, cultivation wasn't able to protect the beans from weeds—especially right in the row. In at

least two trials, wet weather kept growers out of the field long enough to let giant foxtail get ahead and stay ahead of the beans. Growers in these tests proved to themselves that dependable Treflan keeps out weeds and lets beans make better yields than cultivation alone.

Treflan paid off well in narrow row beans

(summary of 5 comparisons)

Per acre averages	Treflan weed control	Untreated
Yield, bu./A	34.4	22.3
Yield increase	12.1 bu.	
Crop value/A	\$82.56	\$53.52
Weed control costs	8.53	0.00
Crop value over weed control costs	74.03	53.52
Extra return/A	\$20.51	

These tests indicate that where weeds are controlled with Treflan, yields can be increased considerably in narrow rows. However, Treflan does not control a few resistant weeds such as cocklebur, Jimsonweed, velvetleaf and ragweed. If you have problems with resistant weeds such as these, you need to plant beans in rows wide enough to cultivate.

Treflan in narrow rows beat wide row cultivated beans, too

(summary of 4 comparisons)

Per acre averages	Treflan (narrow rows)	Cultivated (wide rows)
Yield, bu./A	33.4	25.9
Yield increase	7.5 bu.	
Crop value/A	\$80.16	\$62.16
Weed control costs	10.00	3.82
Crop value over weed control costs	70.16	58.34
Extra return/A	\$11.82	

Treflan returned \$13.93 above weed costs per acre in all test comparisons

Per acre averages	Treflan weed control	Cultivation (all row widths)
Yield, bu./A	34.2	25.5
Yield increase	8.7 bu.	
Crop value/A	\$82.08	\$61.20
Weed control costs	10.39	3.44
Crop value over weed control costs	71.69	57.76
Extra return/A	\$13.93	

While Treflan cost more out of pocket than mechanical weed control methods, the increased yields resulting from outstanding weed control paid for the expense several times over. Average over-all yield increase in the test areas treated with Treflan—34%.

Other Treflan benefits

Faster, easier combining

Some growers reported how many minutes were required to combine treated and untreated areas. In some cases, harvesting time was about equal. But in others, combining beans treated with Treflan was considerably faster. In several cases, growers had to give up combining untreated beans until frost killed the green weeds.

Fewer weed seeds, lower moisture

Beans from areas treated with Treflan generally had less weed seeds, and moisture was somewhat lower than in weedy beans. Fewer weed seeds at harvest can mean easier combining and higher yields the following season.



Summary of all test locations and results

Treflan paid dividends over cultivation alone

Grower Conducting Test	Yield in bu./A		Bu./A Incr.	Extra return over weed costs
	Treflan	Cultiv.		
*Maurice Jones, Towanda, Ill.	45.3	29.7	15.6	\$31.44
Hubert Baker, Mt. Zion, Ill.	34.9	28.2	6.7	13.95
Burl Mobley, Benton, Ia.	26.0	21.2	4.8	3.64
Charles Lueck, Harlan, Ia.	43.0	40.0	3.0	— 1.20
B. E. Beene, Hughes, Ark.	16.7	12.7	4.0	6.35
Dick Clark, Worthington, Minn.	22.0	16.0	6.0	8.90
Harris Heig, Worthington, Minn.	30.5	27.0	3.5	.40
Roy & Gary Dye, Holliday, Mo.	42.0	37.0	5.0	4.12
Walter Graeler, Chesterfield, Mo.	27.0	17.0	10.0	17.90
*George Long, Clay City, Ind.	45.5	35.9	9.6	16.66
*Vernon Pound, Lewis, Ind.	45.3	24.8	20.5	42.82
*Adler Seeds, Sharpsville, Ind.	44.1	21.7	22.4	45.20
Don Marsh, Blanchester, O.	42.0	40.2	1.8	— 1.64
W. T. Hegman, Holly Bluff, Miss.	35.0	23.0	12.0	21.30
Chas. Murphy, Itta Bena, Miss.	28.4	19.0	9.4	12.31
C. E. Boyer, Indianola, Miss.	16.5	11.3	5.2	4.98
Jim Krieder, Bonner Sprs., Kan.	35.5	34.0	1.5	1.25
Thos. Lozmack, Three Oaks, Mich.	37.2	31.0	6.2	5.65
Roy Naugle, Maybee, Mich.	34.5	30.3	4.2	2.20
AVERAGES	34.3	26.3	8.0	\$12.43

Treflan paid dividends in narrow row beans

Grower Conducting Test	Yield in bu./A		Bu./A Incr.	Extra return over weed costs
	Treflan	Untreated		
Don Goodell, Kankakee, Ill.	38.1	24.1	14.0	\$26.80
Hubert Baker, Mt. Zion, Ill.	38.1	25.1	13.0	23.32
Abraham Baerg, Delft, Minn.	33.0	21.0	12.0	17.80
Hal Steinbarger, Mendon, Mich.	33.3	20.6	12.7	20.91
Victor Grutzmacher, Ripon, Wisc.	29.5	20.5	9.0	13.72
AVERAGES	34.4	22.3	12.1	\$20.51

Treflan in narrow rows paid over wide rows

Grower Conducting Test	Yield in bu./A		Bu./A Incr.	Extra return over weed costs
	Treflan	Untreated**		
Roy Schulz, Mankato, Minn.	40.0	27.0	13.0	\$24.70
Maynard Doden, Bigelow, Minn.	29.0	21.0	8.0	12.45
Dale Himrod, Gilmore City, Ia.	33.3	30.3	3.0	1.70
Dale Himrod, Gilmore City, Ia.	31.2	25.4	5.8	8.42
AVERAGES	33.4	25.9	7.5	\$11.82

*Giant foxtail was especially bad in these fields. Cultivation could not control the foxtail right in the row.

**These beans were planted in 38-inch rows and cultivated. However, the beans treated with Treflan in these comparisons were planted in 19-inch rows and never cultivated.

Untreated, uncultivated

Weeds and grass were given free rein . . . and yields show it: 11.0 bushels per acre. Crop value per acre; \$26.40. Combining time was 75% longer and moisture content 3.3% higher than in the Treflan-treated beans.

Mechanical weed control

These beans were rotary hoed once and cultivated once. They should have been cultivated more often. Yield: 21.7 bushels per acre. Cost of weed control: \$2.00. Value of crop over weed control costs: \$50.08. Combining time: 25% longer.

Treflan-treated

These beans were treated with Treflan broadcast before planting. One cultivation, one rotary hoeing. Yield: 44.1 bushels per acre. Cost of weed control: \$10.56. Value of crop over weed control costs: \$95.28—\$45.20 per acre over mechanical cultivation only.



June

July

Here's how Treflan worked in one grower's field test

This field trial (over-all view at right) was set up at Adler's Seed Farms, Sharpsville, Indiana.

On May 17, 1965, most of the field was treated with Treflan applied broadcast at the rate of $1\frac{3}{4}$ pints per acre and incorporated with a double disc with a spiketooth harrow in tandem. A strip twelve rows wide was not treated. Six of the rows were not treated or cultivated to determine how much weeds cut yields. The other six untreated rows were cultivated normally.

The entire field was rotary hoed once just after the beans came up. However, wet weather prevented cultivation long enough that the grass was almost impossible to cover up in the untreated rows.





August



October

Reports from other growers in soybean country

"Our beans did real well in a dry year,"

says Gary Dye, Holliday, Missouri, "and that's what sold us on Treflan. In 1964 our Treflan-treated beans yielded 38 bushels to the acre compared to 25 bushels for the others. In 1965 our soybeans treated with Treflan went 42 bushels to the acre and the beans we cultivated only yielded 37. "We got great weed control all season with Treflan.

"Before using Treflan we had to wait till after frost to combine the beans because the foxtail and pigweed were so bad. I figure Treflan has saved us a lot of wear and tear on the combine.

"We also like Treflan because we can apply it before planting time and don't have to slow down our planting. You can bet we'll use Treflan again next year on our soybeans."

"My beans yielded 40 bushels where I used Treflan,"

reports Roy Schulz, Mankato, Minnesota. "They were planted in narrow rows and never cultivated. My beans in regular row spacing were cultivated and yielded only 27 bushels.

"The ground in our area is heavy, and we have some grass problems. Treflan has done the best job of controlling the grasses.

"I like Treflan because there is less compaction of the soil, since we don't cultivate and can stay out of the field.

"Another thing is that in narrow rows the bean pods are higher up on the plant. This makes combining easier."



"Treflan worked fine on all 220 acres,"

says Hubert W. Baker, Mount Zion, Illinois, about his experience with the product. "I've been testing soybean herbicides on my farm for years," says Baker, "in an effort to find something that will permit me to plant the beans and then let them alone. Of all the chemicals I've used, I'd say Treflan is the best one to date."

Baker used Treflan both in drilled beans and in beans planted in 27-inch rows. The drilled beans treated with Treflan yielded 13.0 bushels more per acre than the untreated beans. In the beans grown in 27-inch rows, those treated with Treflan yielded 6.7 bushels more per acre than the cultivated beans.



Why Treflan pays for itself . . . and more

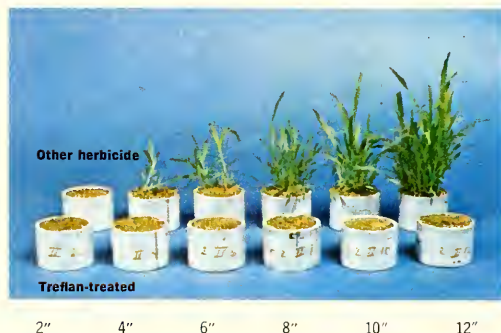
Works every year . . . wet weather or dry



Unlike other soybean herbicides, Treflan doesn't need rain to make it work. Once applied and incorporated into the soil, Treflan kills germinating weeds from existing soil moisture. You can expect good weed and grass control even if it doesn't rain for weeks after application. You can apply it well ahead of planting and get the same good results.

Stays put in the soil

Treflan resists leaching. Even heavy rains won't move it out of the soil layer where most weeds germinate. The photo below demonstrates how:



The figures above show how many inches of water were applied to each soil column pictured. After only 4 inches of water were poured through the soil column treated with another herbicide, weed control started breaking. By the time 8 inches of water had been poured through, weed control was virtually ineffective. Treflan held the weeds through all 12 inches of simulated rain.

Stops weeds and grass for months

Treflan doesn't wear out in just a few weeks but keeps stopping grass and weeds for months. It is so effective that many growers report control right through harvest. Com-



pare this with weed-choked soybeans when you're trying to make time at harvest. And remember the yield reductions that weeds can cause.

Best for foxtails, all other annual grasses



Because it always works no matter what the weather, Treflan is best for all annual grasses, including giant foxtail. It's also sure death to seedling Johnsongrass.

Stops major broadleaf weeds

Treflan also stops many of your broadleaf weeds:

Pigweeds (spiny, redroot)	Lambsquarters
Carelessweed	Purslane
Carpetweed	Knotweed
Russian thistle	Stinging nettle
Kochia	Goosefoot
	Chickweed

As with any pre-emergence herbicide, Treflan won't control all weeds. Some (such as cocklebur, velvetleaf, Jimsonweed and ragweed) require other control measures.

Costs less than other soybean herbicides

On the basis of area actually covered, Treflan costs you less than other pre-emergence soybean weed killers. A broadcast application of Treflan—at only \$6.38 per acre on medium soils—costs little more than most other weed killers applied in a narrow band over the row. Broadcast applications of Treflan have many advantages. They help you save cultivations and cut down on soil compaction, protect your beans even if it's too wet to cultivate, and help prevent weeds in the row middles later in the season.

How to make Treflan work best for you

Treflan can give you the most dependable weed control you've ever had—if you apply it properly. To help you get good results, here are some important things to remember.

Use the proper rate

The amount of Treflan you need depends on your soil type. The following table gives broadcast rates. For band applications, use proportionately less material.

Broadcast rates per acre

Eastern U.S. (Minn., Iowa, Mo., Ark., La., all states farther East)	
Soil type	Rate per acre

Sandy, sandy loam (light)	1 pint
Sandy soils with 2-5% organic matter	1½ pints
Sandy soils with 5-10% organic matter	2 pints
Loam (medium)	1½ pints
Silt, clay (heavy)	2 pints

Central U.S.

(N. Dak., S. Dak., Neb.,
Kan., Okla., Tex.)

Soil type	Rate per acre
Sandy, sandy loam (light)	1 pint
Loam and clay (medium, heavy)	1½ pints
Silt and clay (heavy) with 2-10% organic matter	1½-2 pints

Be sure to use the correct amount of Treflan for your soil type. Too little may result in poor weed control. Too much could damage your beans.



Mix and spray carefully

Treflan mixes easily and thoroughly with water and stays mixed with normal bypass agitation. Simply add the right amount to the spray tank during

the filling operation. Any low-pressure sprayer (20-50 lbs. per sq. in.) in good working condition can be used. Since sprayer parts wear with use, measure the output of each nozzle to make sure each is putting out the same amount of spray. For best results the recommended amount of Treflan should be applied in about 20-40 gallons of water per acre, on a broadcast basis.

For easy calibration, ask your Elanco agricultural chemicals dealer for a new Treflan Application Guide.

Follow soil incorporation directions

Treflan must be mixed, or incorporated, into the soil immediately after application. If possible, spraying and incorporation should be done in the same operation. This can easily be accomplished by mounting the spray boom on either the tractor or incorporation equipment.

To assure dependable weed control, Treflan should be mixed thoroughly into the top few inches of soil, and large clods should be broken up. Once thoroughly mixed throughout the soil, Treflan goes to work immediately, killing weeds as they germinate—regardless of the weather.

Use the right equipment

Many kinds of equipment have been used to incorporate Treflan. When used right, the following types have consistently given good incorporation.



Double disc

(alone or with spike-tooth harrow in tandem). Set to cut 3-6 inches deep and work the ground in two directions (cross disc). Operate at 4-6 mph.



PTO-driven equipment

(hoes, tillers, cultivators). Set the knives to cut 2-3 inches deep.

Rolling cultivator.

Set to cut 2-4 inches deep and operate at 6-8 mph.

Bed conditioner

(Do-All). Set to cut 2-4 inches deep and operate at 4-6 mph. Shallow incorporation with implements set to cut less than 2 inches deep may result in erratic weed control.



Treflan®



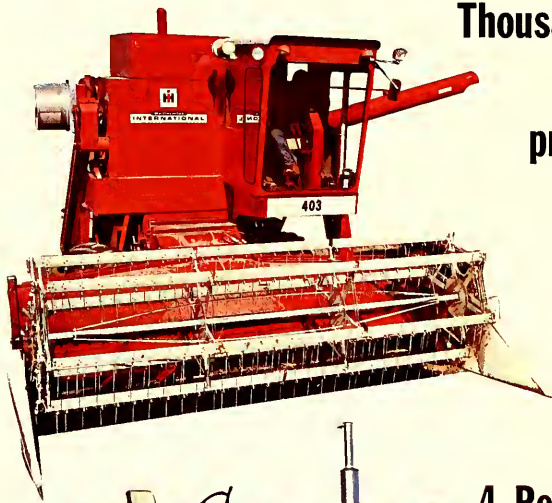
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(Treflan®—trifluralin, Elanco)
ELANCO PRODUCTS COMPANY
A DIVISION OF ELI LILLY AND COMPANY
INDIANAPOLIS, INDIANA

The American Soybean Association
and Elanco challenge you to

WIN THE FIRST NATIONAL SOYBEAN YIELD CONTEST

Thousands
of
prizes



This year when you shoot for top soybean yields, treat at least 10 acres with Treflan and you'll be eligible for valuable prizes in the first National Soybean Yield Contest.

You'll get your choice of equipment or cash: the combine or \$150 cash for each bushel per acre over the 1965 national yield average if you're the national champion; a tractor or \$75 cash for each bushel per acre over the national average if you're a regional winner; and the planter or \$30 cash for each bushel over the national average if you're a state winner. Each winner is eligible for the top prize for which he qualifies only (one prize per winner).

See your Treflan dealer for complete details of the contest.

National Champion

IH 403 Combine—fully equipped with 14-foot header, straw spreader, automatic platform control, grain tank extension, and cab.

4 Regional Champions

IH 656 Farmall Tractor—with Torque Amplifier, 3-point hitch, auxiliary hydraulics with remote control, cross drawbar, and PTO equipped with 540 rpm shaft.



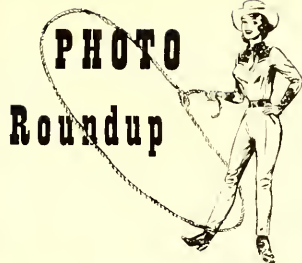
17 State or Area Champions

IH Precision Hilldrop Planter—with 70-lb. seed hopper, adjustable wheel frame, disc markers, liquid or dry fertilizer attachment.

American Soybean Assn. Memberships

Every entrant averaging 40 bushels per acre or more will receive a year's membership in the American Soybean Association and a free subscription to *The Soybean Digest* and *Soybean Bluebook*.





"When in Rome, do as the Romans do," only in this case it's as the Scottish do. Photo shows Arlen Etling, Kansas FFA'er while an exchange student with the Scottish Young Farmers.



Shown with Dr. M. J. Brennan, Pinchot Institute director, are (left) George Fox, Indiana president, and Harrell Day, Alabama president. They helped plan a National Youth Conference on Natural Beauty. Fox is co-chairman.



Governor John Connally proclaimed FFA Week in Texas. Pictured are Kenneth Graeber, president, and Don Jobes, Jr., Texas executive secretary.

Minnesota Governor Rolvaag hands over "Porky" to Gary Swenson, president of the Stillwater Chapter. The chapter will finish the hog to be sold in a special contest promoting pork.



Loudoun County, Virginia, FFA Chapter posts wildlife roadside sign to call attention to wildlife conservation. From left, Robert George and John Dickens, president.



Which Grain To Feed?

Here's how to make the right decision to save on your feed bill.

YOUR FFA magazine is always looking for ways to save you money. Recently, when the price of wheat fell to within 2 cents of the price of corn, the "Looking Ahead" section suggested you consider substituting wheat for corn since it is rated 5 percent higher as a feed for dairy and fattening cattle. It also set us to work preparing this report as a guide for your future grain substitution decisions.

If you produce meat or milk, you already know that the feed bill is your big expense item. William Spencer, wheat marketing specialist at Colorado State University, has prepared a feed grain substitution scale that will enable you to determine quickly which feed grain will produce the largest gain or increase in production for the smallest cost. A sure way to save on the feed bill.

You should consider several points when choosing the most profitable feed:

1. Check the delivery cost of the feed grain.

2. Know the nutritional feed value.

3. Change feeds gradually to avoid loss of gain or reduced output.

4. Make sure rations are properly prepared and balanced. The scale assumes the grains are of average quality and used properly. For example, you may replace corn with sorghum in a hog ration, but you can't replace most of the corn with oats without slowing gains. It is also assumed that no additional feeding costs (milling, additional equipment, etc.) will be incurred by substituting one grain for another.

The substitution scales compare the nutritional feed values and delivered costs of corn, wheat, barley, sorghum, and oats. Use of the guide will aid your flexibility, Spencer says. When small changes in feed grain prices occur, you can quickly take advantage of lower prices and substitute a more profitable grain.

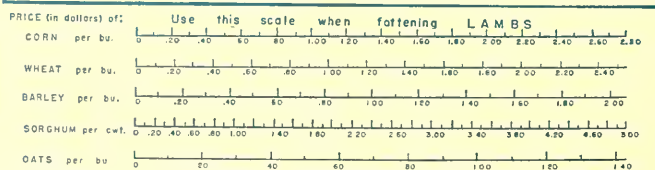
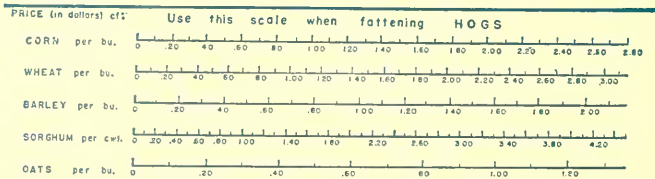
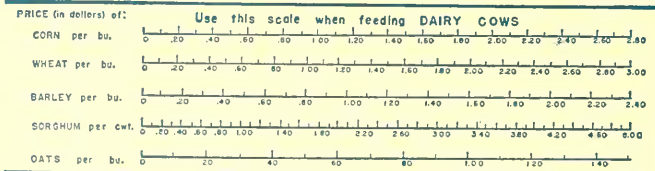
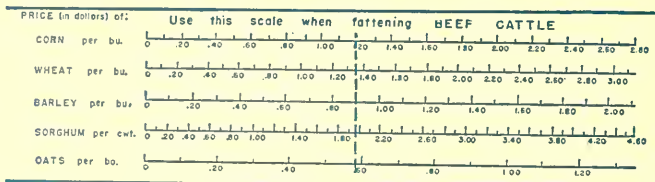
For example, when the price of corn is \$1.20 per bushel, wheat at less than \$1.38 per bushel or sorghum at less

than \$1.90 per hundredweight becomes a profitable substitution in a beef cattle ration. The guide provides a quick visual comparison of these and other kinds of feeding alternatives.

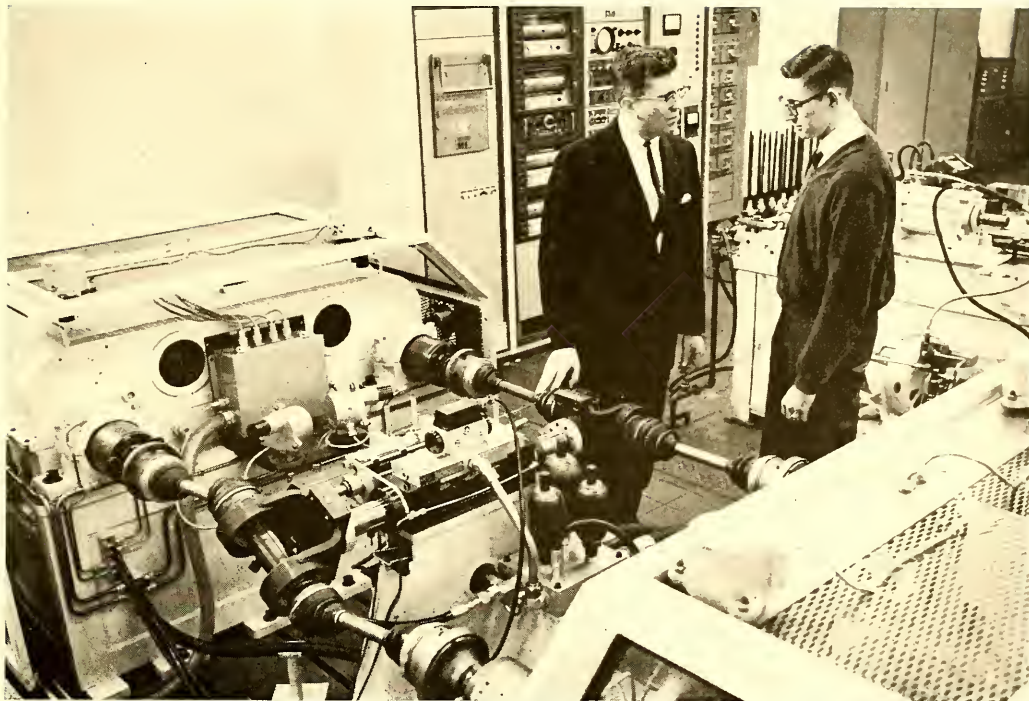
To use the substitution scale, you must know the price of the com-

mon feed grains—corn, oats, wheat, barley, sorghum. To use our earlier example, note the dotted line on the beef cattle fattening scale. If the price of corn is \$1.20 and wheat is less than \$1.38, it would pay to substitute wheat in your ration.

FEED GRAIN SUBSTITUTION SCALE



**In a car that isn't there,
on a road that never existed,
up hills, around sharp curves,
over bumps—for 6,000 miles non-stop.**



You're looking at it—road, bumps, curves and car rolled into one. It's the front-wheel drive axle testing machine in the engineering developmental testing lab at Saginaw Steering Gear Division of General Motors. And the test instructions come from the tape-programming control machine in the background.

The mechanism can be used in a variety of ways, from a test of the use of a different metal to testing of

a completely new moving part design. Because this laboratory is devoted only to advanced designing, it's a very fascinating place for a young man interested in science.

And, Robert T. O'Dell is that fellow. Here a Saginaw Steering Gear Engineer is giving him a detailed explanation of what this machine can reveal about some particular part being tested.

Bob, an honor student at Buena Vista Township High

School, plans a career in Nuclear Physics. In fact, as a member of the Future Scientists of America Club, he already has built a Linear Accelerator—better known as an Atom Smasher.

On this visit to Saginaw Steering Gear, Bob had an opportunity to see many future projects.

And he got an idea of how General Motors scientists and engineers keep on making things better.

General Motors Makes Things Better

Chevrolet • Pontiac • Oldsmobile • Buick • Cadillac •
With Body by Fisher • Frigidaire • GMC Truck & Coach • Detroit Diesel •
United Delco • AC Spark Plug • Euclid

FISHING'S OLD DEPENDABLE

The Spoon

FISHING LURES come and go. What catches fish today may be outdated tomorrow. Many of the favorites 20 years ago no longer rank with the best sellers. Shapes and designs change. Colors go out of style. You may remember when red and white were the combination which sold best. Nowadays you see fishing plugs in wild colors like blue and purple, something hitherto unheard of.

But in this constant evolution, there is one bait which has defied change. Its shape is about the same as it was at the turn of the century, and although it is now available in many colors, the basic spoon is still silvery finished.

The spoon has remained popular because it catches all kinds of game fish. Just about every predatory fish feeds on tiny bait fish, the minnow being the most popular. The spoon, with its flash and wobbling action, resembles a small fish. Predators like trout, bass, and pike can't resist it.

No one knows the exact origin of the spoon, but there is written record of it being used before 1800 in Sweden and Lapland, when spoons were made from crude bits of shell, shaped to wobble and dart in the water.

Whatever its origin, there is one fact about the spoon which cannot be disputed; it will catch fish, all kinds of fish. I've used it to take almost every game fish imaginable from trout in mountain lakes and streams to bass in rivers to white bass in impoundments to sea trout and channel bass in salt water. A spoon works just about any place.

There are spoons available now in all sorts of color schemes. Red and white stripes are still popular in the far North for northern pike. A pastel pink color produces in salt water. At times I've caught bass on a black spoon when nothing else would work. But of all colors, the two favorites still are silver and brass or hammered copper. There are no hard and fast rules for fishing spoons, but I've found that in alcohol-clear waters the brass or hammered copper seems to work best, while silver prompts the most strikes in deep green water or when a lake or stream is slightly murky or off-color.

Another reason the spoon has remained popular is because it is versa-

**Here's the lure
that catches
all kinds of
game fish. Read
this to see why.**

**By
Russell Tinsley**



Spoons, like the one that caught this jack crevalle, produce in salt water.

tile. You can fish it on top, shallow or deep, fast or slow. The two basic spoons are one with a fixed hook that wobbles in the water and one with a treble hook attached to the spoon by a split ring which turns and twists. The wobbling spoon is the most popular.

When simply tossed out and reeled back, the spoon is designed to run fairly shallow, perhaps two or three feet under the surface. This standard retrieve produces quite well, particularly in the spring and fall on bass and pike or when white bass are schooling on the surface. It also works when casting for sea trout or other salt-water species. Sometimes, however, it pays to alter your retrieve to fit a specific situation.

During the summer, for example, bass might be in deep water near the bottom. A heavy spoon, preferably with a fixed hook that is weedless, is cast out and allowed to plummet to bottom. Then it is retrieved with a stop and go motion. The spoon is pulled off the bottom, then allowed to flutter back down. This retrieve has paid off many times when fishing for trout in mountain streams, for king mackerel in the Gulf of Mexico, and for white bass.

Another specific instance might be when fish are in weedy waters and a conventional bait will not work because of the vegetation. I've caught bass in such spots by throwing a spoon and, holding the rod tip high, starting to reel the moment the bait kisses the surface. This sort of makes the spoon dance along the top, where it won't foul in the weeds. There is nothing

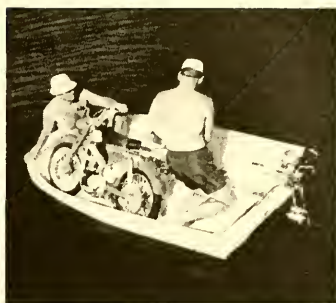
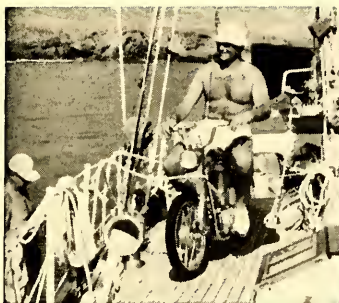


Spoons come in almost every size and shape and catch all kinds of fish.

quite like a belligerent bass or pike boiling out of the weeds, tossing stems and water every which way in its eagerness to get at the lure.

Every tackle box ought to have spoons among its contents. If I had to pick just one bait for all my fishing, I'd choose the silver spoon. It isn't an infallible lure that produces all the time. No bait is that certain. But day after day, month after month, year after year, the spoon continues to catch fish in practically every locale. Fishing wouldn't be the same without it.

The National FUTURE FARMER



"Take your Trail 90 anywhere," says Bob Agramonte.

Mr. Robert Agramonte of Laguna Beach, California takes a Honda Trail 90 aboard his yacht when exploring in the Channel Islands off the southern California coast.

"I have been visiting the Channel Islands for over ten

years on summer cruises of one or more weeks' duration and have never been able to explore them properly. But with the Trail 90, we were able to cover the difficult terrain comfortably. I recommend the Trail 90 to yachtsmen

with a yen for exploration."

Hunting, fishing, or camping, the Trail 90 solves your problems. No wonder Honda is the world's biggest seller!

HONDA
"Trail 90"

Free booklet! "The Safety & Fun of Two-Wheel Motoring." Write Dept. LK, American Honda Motor Co., Box 50, Gardena, Calif. © 1966 AHM

IN OUR prairie pioneer life, the whims of fashion did not reach us. Keeping warm in winter was our greatest problem in dress. When I was in my teens, I defied the cold in a coat of armor, and this is how it happened.

Badgers were common in the prairie states during the early years. While my uncle was plowing under the tall buffalo grass, he sometimes surprised a badger at a distance from its hole. He carried a heavy club tied to his plow, and after a few swift sprints, he had enough skins to make a coat. He had three sons, and the coat descended to each in turn. Finally this indestructible coat came to me.

In the rush of pioneer work, my uncle had not taken time to tan the skins. The coat became as hard and stiff as if made of metal.

The coat did not hang from a hook; it stood upright in whatever corner it was placed. Once when attacked by an enemy on the village street, I was helpless. His well-aimed snowballs splattered against my armor, but I could not bend low enough to secure ammunition and return his fire. This was most humiliating.

Human nature can endure the sharpest criticism, but it cannot stand up under ridicule. When the little girls of the village finally learned of the unyielding nature of my coat, they whispered and giggled and I knew they did not regard me as a shining knight on a white charger. My dislike of the coat became so strong that it was put away and I did not have to wear it again. It is probably still not worn out.

But I still had to have a coat, and this time I bought it from a town store. A new man had come to town—a very smooth merchant. One day I noticed a coat in his shop window at a price I thought could be managed. I had my mother examine the coat from the sidewalk, but I wanted to do the actual buying all by myself.

The next day I entered the shop very offhand, as I wanted to impress the merchant that buying a coat was old stuff for me. When I asked for the coat on display in the window, he looked at me for a moment, without a word. Then he said in a low tone as if letting me in on a secret: "My boy, I'll tell you something. That coat in the window is not first-class, but I must sell it to somebody, so don't mention what I'm telling you. I wouldn't try to sell it to you because you understand values and you wouldn't be satisfied. Besides, you're not the kind of person to wear a cheap coat. I could see that the minute you walked into the shop."

For a moment the merchant's tremendous flow of words ceased, and I fully expected him to burst into tears

as he thought of the crime of selling me a cheap and unworthy coat. After a pause he confided to me, almost in a whisper: "I'll tell you what I'll do, and I wouldn't do it for anyone else. I have a coat in the back, just arrived from the East. It was made to order for a big city banker, but he was called suddenly to the head bank in London and did not call for his coat. I'll let you have it as a personal favor. I doubt if anyone could afford to buy it, but I'm letting you have it as a gift—almost!"

While he talked, this generous merchant brought out the other coat. Before I could organize myself, he had it on me. He patted and smoothed it as he said: "A perfect fit! I knew you could fill the coat of a banker! Ah, how true, clothes make the man! Your friends will hardly know you. In fact you'll make a lot of new friends. You don't need to tell anyone that I made you a gift—almost. Now I expect you were going to pay cash for that coat in the window."

Under the spell, I handed him the money I had brought. Then he said: "Now for the slight balance I can arrange easy payments. Just sign here." He produced a printed form, which I signed without reading.

"Keep the new coat on, my boy. It does something for you. I'll roll up your old coat. And here's the exact copy of what you've just signed." He put the slip of paper in my coat pocket. As I began to leave, he shook hands: "It always makes me happy to meet a customer like you."

I walked away in a kind of daze. I glanced slyly at the people I met on the street, wondering how they would react as they became aware that a young banker walked among them. People I knew nodded casually as always; several called me by name. No one seemed impressed.

As I neared home, the mental haze began to clear. I examined the slip I had signed. The coat I had bought cost a little more than three times the one I had intended to buy. I knew I could not possibly meet the payments.

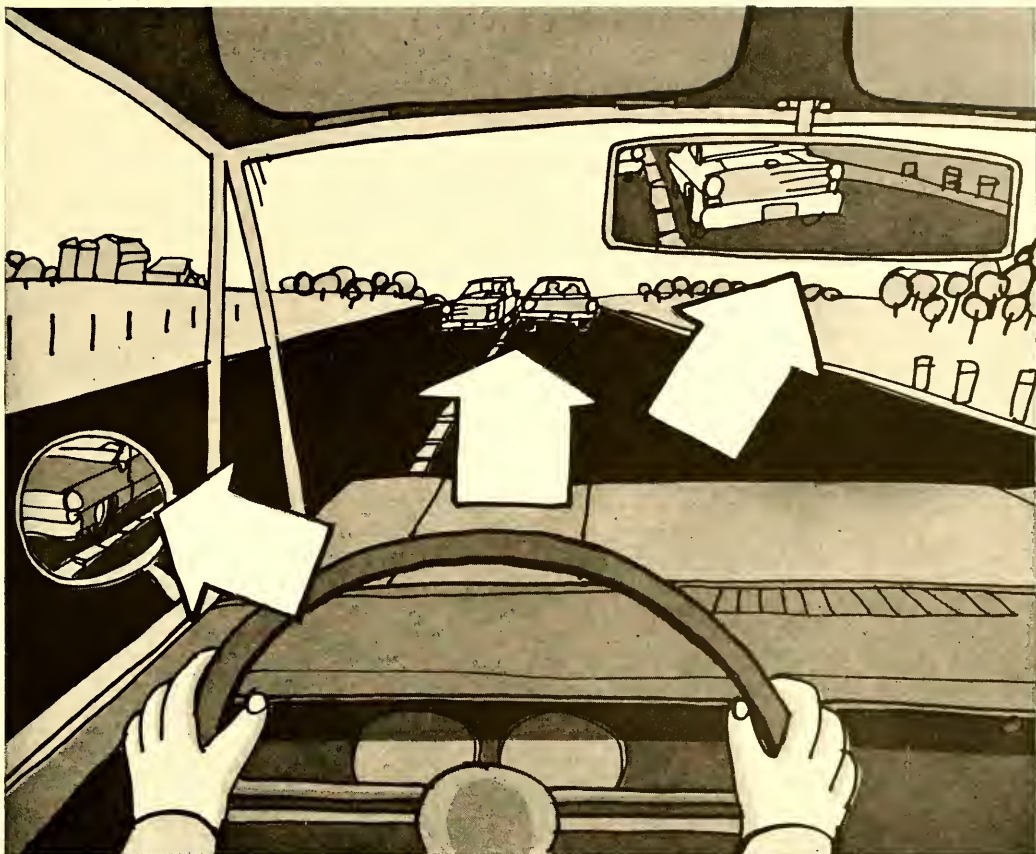
My father had not seen the coat in the window, so he did not notice the difference. But my mother had to know, and she was most understanding. During several years she had saved a small amount for an emergency. She did not explain what emergency she had in mind. Valiantly she helped me with my debt.

So this was another lesson learned the hard way, and perhaps it was worthwhile. Never again have I been flattered into making such a foolish agreement. In later years when smooth salesmen dangled shares in an oil well or a gold mine, I said to myself: "My boy, you're not yet a big city banker."



The Lesson of the Coat!

By Allen Evans



Keep your eyes moving when you drive

To become an expert at the wheel, learn to keep your eyes on the move as you drive.

The key to good driving is to shift your vision every two seconds. Keep checking near, then far and to both sides. Don't just focus on one object ahead. And remember to check your mirrors, too, at least once every five seconds. At night, try to see beyond the range of your headlights. Keep your eyes moving.

Shifting your vision as you drive keeps you posted on traffic conditions and other cars. It's a good seeing

habit according to Harold Smith, originator of "The Smith System of No-Accident Driving." And—it will make you a better, safer driver.



FOR A SAFER AMERICAN ROAD

[illegible]



How to complete your insect control program with a twist of the wrist

A WELL planned insect control program does not end after the last piece of equipment is put away and the empty pesticide containers are destroyed.

The last step is to *clean up*. A twist of the wrist plus a little soap and water is all it takes to make sure none of the pesticide remains on your hands or arms. *Important: Don't be tempted to*

smoke, eat or drink until after cleanup.

Safety makes good sense and it can also make a difference in your profits. By always following instructions on the label you automatically get the dosage you need. You don't waste insecticides by over-dosing. And you don't risk poor insect control and possible crop loss due to under-dosing.

You can get a free copy of "Safe Dis-

posal of Empty Pesticide Containers and Surplus Pesticides" [U.S.D.A. bulletin 0-750-459(22)] and other important safety information by writing to Shell Chemical Company, Agricultural Chemicals Division, Dept. FF-4 110 West 51st Street, New York 10020.

Shell Chemical Company
Agricultural Chemicals Division





ALABAMA



ALASKA



ARIZONA



DELAWARE



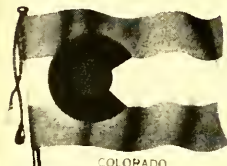
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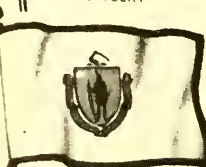
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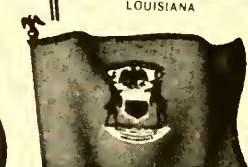
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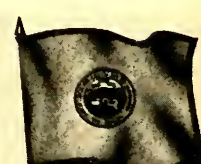
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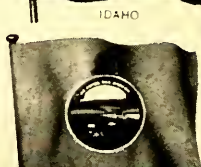
IDAHO



NEBRASKA



IOWA



KANSAS



NEW MEXICO

the glorious 50

DO YOU KNOW your flag? Do you know how it looks, what it stands for, the history it represents? The story told by the 50 state flags is the story of America.

Many emblems were born in battle. In fact, the Nevada standard displays the words "Battle Born," significant of that state's admission to the Union during the Civil War.

New Jersey's banner went through the Revolutionary War and was proudly displayed at Cornwallis' Yorktown surrender. The North Dakota flag saw action at the head of the First North Dakota infantry in no less than 37 engagements during the Spanish-American War and the Philippine Insurrection. The Michigan and Wisconsin banners both originated during the Civil War. The Wolverine State emblem was unfurled at the laying of the cornerstone of a monument in Soldiers' National Cemetery, Gettysburg, on July 4, 1865.

The California flag was born in the "Bear Flag Revolt" of settlers against the Mexican government at the Cosumnes River in 1846. Arizona's flag, showing the rays of the setting sun, was first flown by the battleship Arizona. Ironically, the battleship was sunk at Pearl Harbor by the nation whose flag bears the rising sun.

The standard of the forty-ninth state, completely different from all others, was drawn in 1927 by Benny Benson, a 13-year-old orphan schoolboy. He wrote: "The blue field is for the Alaska sky and the forget-me-not, an Alaska flower. The North Star is for the future State of Alaska, the most northerly of the Union. The Dipper is for the Great Bear—symbolizing strength."

The Indiana, Illinois, Washington, and Wyoming flags resulted from contests. Washington's banner, incidentally, is the only one of the 50 with a green background. The buffalo, once monarch of the Great Plains, still reigns supreme on the Wyoming flag.



MARYLAND



MINNESOTA



MISSISSIPPI



OHIO



OKLAHOMA

The flag of our newest state, Hawaii, displays the British Union Jack on its upper corner, and the eight white, red, and blue stripes represent the major islands of the group.

Several flags might claim the distinction of being the oldest among the 50. There is no question, however, that the Lone Star banner of Texas is the senior *official* flag. It was formally adopted in 1839 and has remained unchanged ever since. The Maryland flag, though officially made that state's emblem in 1904, is nevertheless one of the oldest flags in the world. It bears the arms of the Calvert and Crossland families. Calvert was the family name of the Lords Baltimore who founded Maryland.

The Rhode Island anchor was first used as a colony symbol on a seal adopted in 1647. The motto "Hope" was added in 1664 when the government was reorganized under a charter from King Charles II. The Louisiana flag, though not adopted by that state until 1912, has been in use since the War of 1812. It is the tenth banner to fly over Louisiana soil. Oklahoma claims this record, however, as the Oklahoma flag is the fourteenth which that state has seen.

Dates displayed by the Delaware and North Carolina emblems have special historical significance. December 7, 1787, was the day Delaware ratified the federal Constitution, becoming the first state to do so.

The uppermost date on the North Carolina banner refers to the Mecklenburg Declaration of Independence from England, adopted at a meeting of the citizens of Mecklenburg County, North Carolina, on May 20, 1775. Much historical controversy has occurred because no draft of this document has ever been discovered. The lower date commemorates the Halifax Resolves, which empowered delegates from North Carolina "to concur with the delegates of the other Colonies in declaring Independence. . . ."

A former president of the United States described our national ensign as symbolic of the qualities of a great people. "The flag," said Woodrow Wilson, "is the embodiment, not of sentiment, but of history. It represents the experiences made by men and women, the experiences of those who do and live under that flag."

The same can truly be said of the 50 state flags, for each one stands for a fundamental portion of America's vibrant history.

Article courtesy of State Mutual Life Assurance Company of America. Photos of state flags from Compton's Encyclopedia.



RHODE ISLAND



SOUTH CAROLINA



NEW HAMPSHIRE



NEW JERSEY



NORTH CAROLINA



NORTH DAKOTA



OREGON



PENNSYLVANIA



SOUTH DAKOTA



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NEVADA



TEXAS



UTAH



VERMONT



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NEW YORK



WASHINGTON



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WISCONSIN



WYOMING

Grow Corn

(Continued from Page 30)

loam creek or river bottom land was popular with the winners.

2. Geometry of planting makes a difference. Narrow-row corn is the talk of the Corn Belt, and row width, to some extent, determines how thickly you plant. Only one member of the champion group planted in 20-inch rows, and he may have lost what advantage he had by planting too thickly. The big advantage of 20-inch rows is that you get better spacing of the plants in the 24,000 plants per acre range. Most yield response studies in rate-of-planting show a decreasing im-

portance to added population. Even though this champion got a winning 228.8 bushels per acre yield with a 40,000 plant population in 20-inch rows, you can't help wondering what his yield would have been had he held plant population to around 24,000. The other winners planted in 30-, 36-, and 38-inch rows.

From what the champions have done, it would appear best to select a hybrid that will stand thick planting, probably a single- or three-way cross. One corn company says flatly that normal-sized hybrids will out-yield shorter corns regardless of spacing, but before you decide, find out what corn is best adapted to your

area. Also, little attention has been given to the fact that the farther north you live, the more likely you are to get an increased yield from narrow rows. For example, Illinois studies show about a 5 percent increase in favor of 20-inch rows while Canada has reported 30 percent increases from changing to the narrower rows.

3. Pour on the fertilizer. This is where all the champions "pour on the coal." Here's how they fertilized:

- They tested their soil to find out what amounts of key ingredients were available. Remember, it takes 20 pounds of nitrogen, 12 pounds of phosphate, and 12 pounds of potash for every ten bushels of shelled corn.

- The champions used high rates of nitrogen with a large portion plowed under.

- They used extra starter fertilizer, usually around 600 pounds of 6-24-24 or 9-12-12.

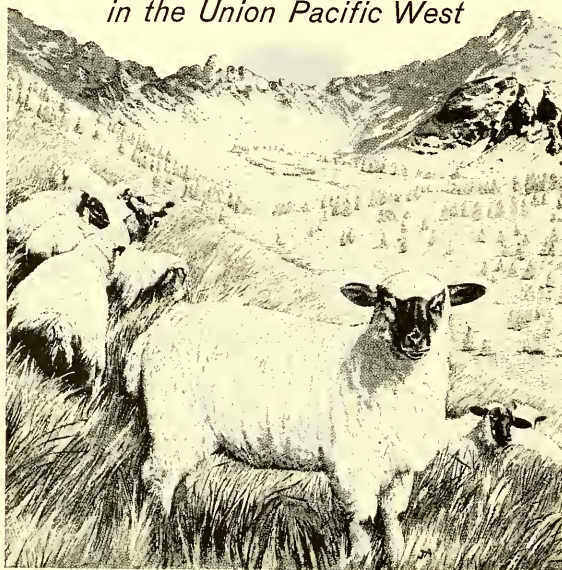
- Phosphorus and potassium amounts were based on soil test results.

4. Other winning production practices included the use of Aldrin or similar soil insecticides to insure a healthy root system—the foundation of a winning yield. Usual rate of application was from five to ten pounds per acre. For weed control the champions used Atrazine, Randox, or other chemical weed control. Lorox and Atrazine in combination get good results as does the old stand-by, 2,4-D. Some cultivation, hand hoeing, and irrigation were also noted.

Finally, the champions did a careful job of harvesting. They began harvesting as soon as corn moisture would permit, usually in the 15 to 30 percent range. Keep in mind that late harvest increases losses at the rate of one bushel per acre or more per week of delay.

Good luck!

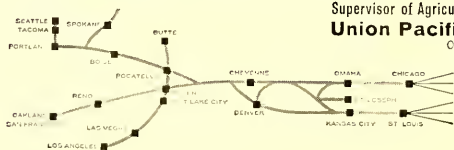
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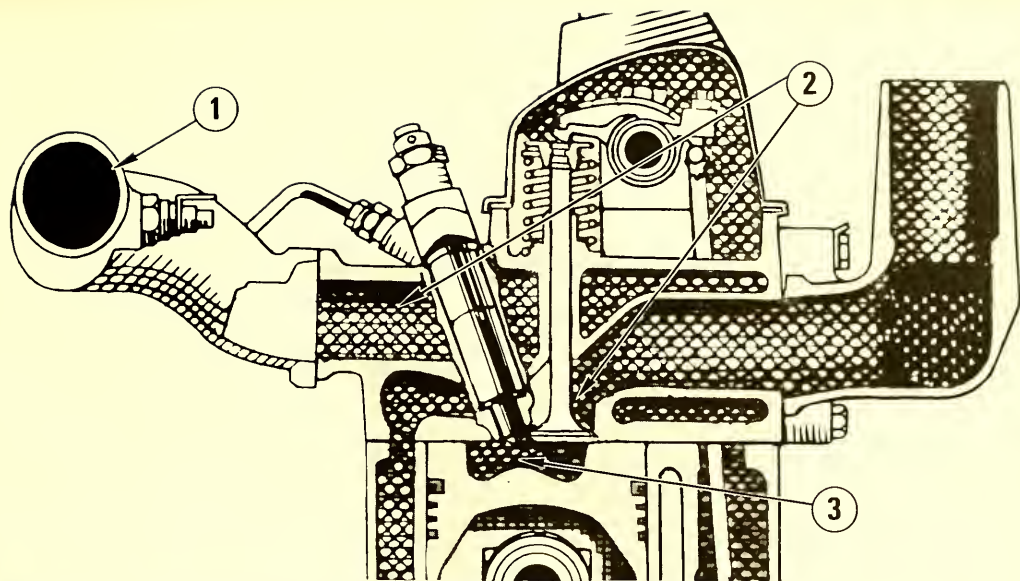
Union Pacific is part of the West where exciting opportunities exist for energetic young farmers. If you'd like to know more about the West, write to us, let us know your special interest—we'd like to share our knowledge, based on almost a century of working with Western farmers and ranchers.

Supervisor of Agricultural Development
Union Pacific Railroad
Omaha, Nebraska 68102



"Here comes old 'Now when I was a boy.'"

The National FUTURE FARMER



NEW FORD OPPOSED MANIFOLDS boost lugging ability, add fuel economy

Intake manifold on the left—exhaust on the right. A design principle from high-speed racing engines now adds to Ford tractor performance. And for good reasons:

- ① Isolating intake manifold from exhaust heat prevents power-robbing heat build-up. Cooler intake air adds efficiency, boosts peak power output for diesels. And, for gasoline engines, only Ford uses thermostatic temperature control for intake manifolds. Hot weather or cold, new Ford engines hold peak performance.
- ② Opposed manifold design permits bigger and straighter air intake and exhaust passages. This cuts power needed to pump air and gases through the engine. The payoff is in more usable power at PTO and drawbar.

- ③ Ford's big-bore design makes room for larger valves. Less friction—greater efficiency. Advanced combustion chamber design helps get more work from fuel, too.

You need only look to see the massive strength of new Ford tractor engines. Big, rugged. Built to last. But it takes a tryout to know how these deep-breathing new engines perform.

Put a new Ford on a tough job. Learn what real lugging power is. Check fuel economy for another pleasant surprise. New-Size Fords—a lasting and profitable investment on any farm.



HOMEMADE AND HELPFUL FOR

Handling Hogs

Photos by
A. M. Wettach

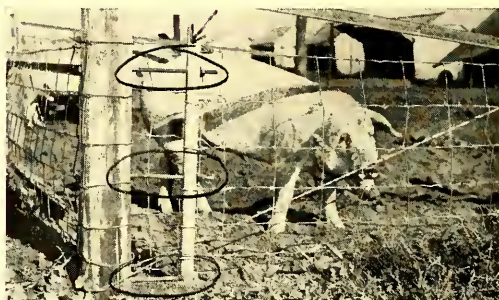


← A set of fan blades and a guard were mounted on the shaft of a lightweight electric motor for cooling a swine farrowing house in warm weather. Base was fastened to a plank across the doorway in the space for upper half of a divided door, on the inside, so door could be closed when cold.

→ This lightweight hog loading chute is mounted on wheelbarrow wheels and a pipe axle, which may be cranked by pulley and cable to raise or lower the chute to meet trucks. Framing is angle irons with outside bracing for the sides. They may be bolted or welded.



→ Hog pen partitions are kept tight by long take-up bolts through the corner post and an iron pipe around which the wire is wrapped. Bolts are rods which have been threaded and washered on both ends. (Iowa State Farm)



Car wheels with spindles are welded to an I-beam axle which has a pipe tongue braced with flat iron on both sides. Chute is trailered in drop position and raised so height matches truck bed for unloading. A folding yoke with adjustable pipe makes raising and lowering possible.



Feeders and waterers are mounted on sleds to reduce field damage from wallows. The sleds are 8 feet wide, 16 feet long, and covered with two-inch planks spiked to 4- by 4-inch runners, three to a sled. Steps are saved and work cut when sleds are arranged along the fence.



Editor's Note: *The National FUTURE FARMER* needs farm shop project ideas of items that FFA members can build. We will pay \$20.00 for the best idea published in each issue and \$10.00 for each additional item used. Submissions must include a clear black and white photo along with a brief yet complete description of materials used and a few pointers on how to build.



What kind of research stands behind every Geigy product?

Behind every Geigy product is research that's more than just a search for new chemicals. Research at Geigy is dedicated to the development of dependable chemicals that definitely satisfy the specific needs of ever-changing farm practices.

New compounds which look promising in laboratory and greenhouse experiments undergo further screening at Geigy Research Farms in New York, Florida, Mis-

sissippi, Iowa, and California.

When a new compound's effectiveness is verified in these field plot trials it is released to agricultural colleges, experiment stations, and other testing agencies for their scrutiny and evaluation.

But, you know how farmers are. Despite all this rigid pre-testing, they want proof that a product works for them on their farm.

That's why we also make continual on-farm checks. For instance,

Geigy fieldmen visited 4,653 farms in 1965 to check yields in corn treated with Atrazine herbicide.

We invest in this kind of research because we know we must be sure Geigy products do exactly what we say they'll do.

Geigy Agricultural Chemicals, Division of Geigy Chemical Corporation, Ardsley, New York 10502.

Geigy

CREATORS OF CHEMICALS FOR MODERN AGRICULTURE



READ THE LABEL READ THE LABEL —TWICE

DOES "AGITATE" mean to use a farm spray quickly? Is an "antidote" something you mix with a spray before using it? Don't feel too superior if you know the answers. More persons than you'd think missed the meanings of these two words and others. That's why it's a good idea to read the label a second time and ask yourself if you really know the meaning of what you have read.

Glenn A. Frederick and Dick Powers, editors with the Wisconsin Extension

Service, found in a recent survey that even though you read the label, you may not know the meaning of some of the words. They sampled about 200 persons—varied-income farmers, homemakers, and vocational agriculture students. Words used are found on standard pesticide labels.

Their findings, recently published in the national magazine of the American Association of Agricultural College Editors, were eye openers. It may mean that word use has outstripped word understanding in some areas.

Check these for instance:

AGITATE: Stumped 16 percent of the farmers, more of the students. Half the misses thought it meant to use the spray quickly. **Correct answer:** to set or keep in motion; to stir up or excite.

ANTIDOTE: About 46 percent of the students and 30 percent of the farmers missed it. Most popular wrong answer was it is a printed warning that means the material is poisonous. **Correct answer:** a remedy to counteract the effects of poison.

FOLIAGE: Missed by 17 percent of the farmers and students. Farmers thought it was the ground around plants; students thought it was a certain form of insect. **Correct answer:** collectively, the mass of leaves, flowers, and branches.

FUNGICIDE: Up to half the farmers and 33 percent of the students missed it. They thought a fungicide was something that causes plant diseases. **Correct answer:** a substance that destroys fungi or inhibits the growth of spores or hyphae.

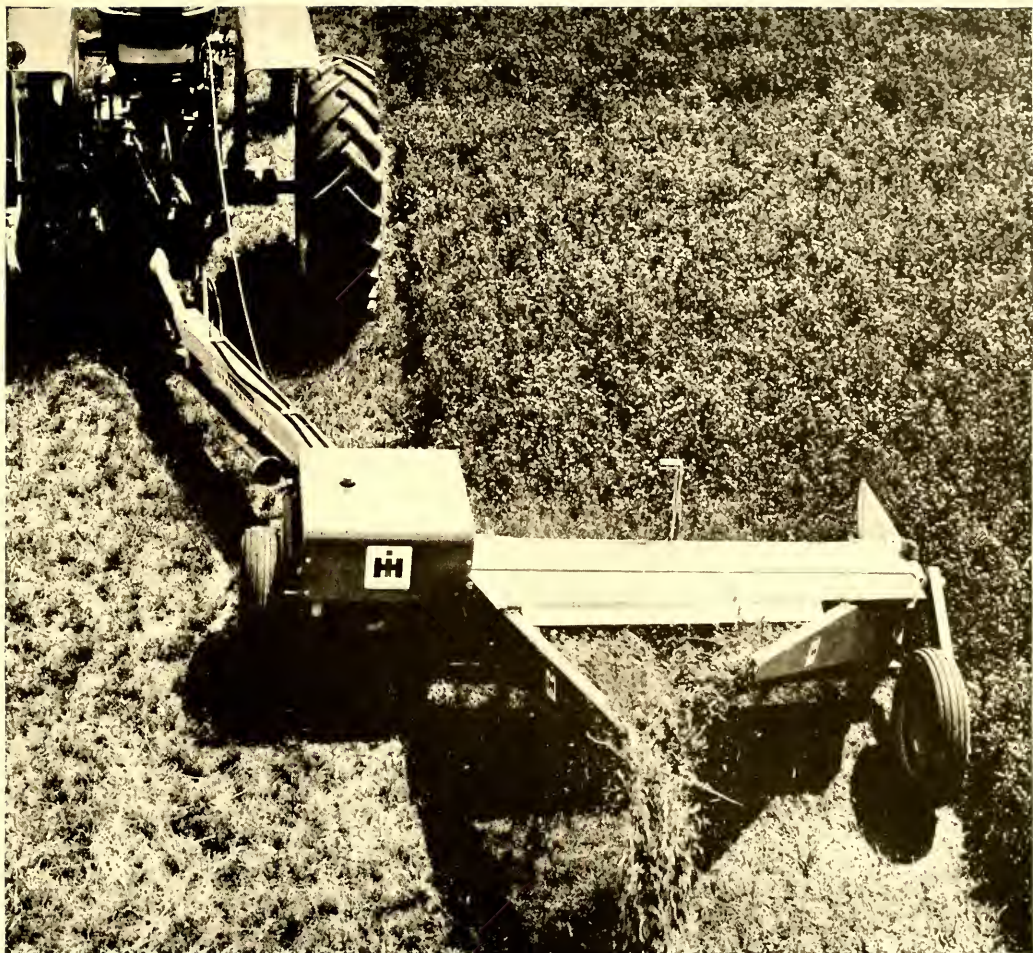
HAZARDOUS: Missed by 25 percent of the farmers. Many thought it was something poisonous to insects but safe for people. **Correct answer:** dangerous; risky.

HERBICIDE: High miss rate by all three groups. Some thought it meant harmful to insects only. **Correct answer:** a chemical used to kill specific unwanted plants (weeds).

(Continued on Page 60)

GLOSSARY OF TERMS

active ingredient	The killing agent—the chemical within the mixture which does the job on the insect or plant.	fumigant	A gaseous pesticide such as methyl bromide.
acute toxicity	Severe attack of poisoning due to one overexposure to a chemical.	halogenated hydrocarbon	A group of chemicals containing halogens (usually highly toxic) such as bromine or fluorine (includes most fumigants).
carbamates	A group of chemicals including SEVIN, a common insecticide, and many other effective fungicides now in use.	incompatible	Ag chemicals that cannot be mixed or used together because of undesirable reactions.
chlorinated hydrocarbons	A group of chemicals which includes D.D.D., Endrin, Aldrin, and Dieldrin.	insecticide	Ag chemical used to kill insects.
chronic toxicity	A condition in which a chemical accumulates in the body causing a gradual poisoning, bringing on illness or sometimes death.	L.D.₅₀	Lethal Dose—50 percent (the amount of a pesticide that will kill 50 percent of the test animals).
concentrate	An ag chemical before dilution.	oral	Pertaining to the mouth.
contaminate	To apply ag chemicals where they are not wanted, creating a hazard.	pesticide	An ag chemical used to kill pests.
contraindicated	Medical term meaning "Do not use . . ."	ppm	Parts per million; a measure of contamination.
dermal	Pertaining to the skin.	residue	The amount of pesticide in or on a product when it is marketed.
dosage	Amount of chemical applied.	slurry	A thick solution of pesticide wettable powder and water.
drift	Movement of a chemical on the wind or air currents from the area of intended application.	tolerance	Safe levels of residue established by the Food and Drug Administration.
formulate	To mix a batch of pesticide, diluting the concentrate with water or other solvents for application.	zero tolerance	No legal residue.



NEW 816 MOWER-CONDITIONER FOR EFFICIENT HAYING

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April-May, 1966

With it, you can economically cut, condition and windrow in one pass, taking a 7 or 9-foot cut. You can save more than two miles of field travel per acre over separate operations. And save a lot of fuel, too.

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3—Grain Crop Drying—If you are a cash crop grower or one who feeds his crop, you'll find this booklet details in colorful illustrations how a grain dryer can make the weather work for you. Explains the basic principles of grain drying and answers such basic questions as "Which Method Is Best for You?" and "How Much Extra Profit Can I Expect?" (Mathews Company)

4—How to Make Money from Trees—Illustrated in four-color, this publication explains that trees are a renewable crop. The amount of income from them depends upon how they are protected, managed, harvested, and sold. It gives you helpful tips on all these subjects along with charts to help the forest owner figure trees and sticks per cord. (Southern Pulpwood Conservation Association)

5—Agriculture in the Peace Corps—Peace Corps volunteers are helping people in remote and strange lands to solve the ageless problem: how to raise enough good food to eat. This 20-page booklet outlines all of the agricultural skills from animal science to wildlife management and explains how and where these skills can be used in the Peace Corps. (Peace Corps)

1 2 3 4 5

Send to:

The National FUTURE FARMER
Alexandria, Virginia 22306

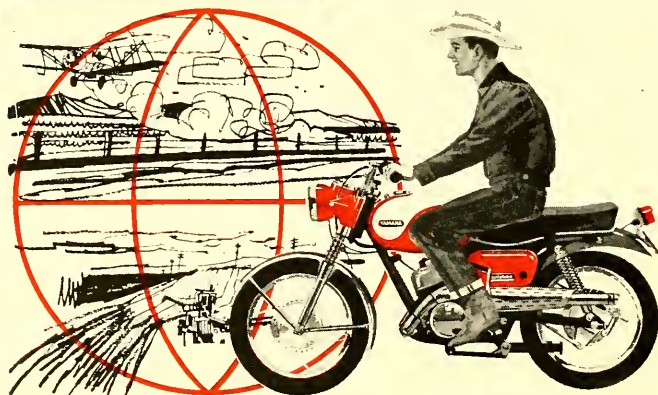
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SINCE 1887



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"But other seed fell
into good ground,
and brought forth fruit,
some an hundredfold,
some sixtyfold,
some thirtyfold"

Matthew 13:8

The land was everything in Matthew's day.

So, when he told his story, it was in the language of the land.

Good ground. Fruitfulness. Thirtyfold.

Unfortunately, people don't talk that way anymore.

Which would seem to mean that the land isn't as important as it once was.

But this isn't so.

The land still nourishes us. And its fruits are needed more than ever.

That's why farmers are always looking for better ways to discipline the land.

Cultivate it. Test it scientifically.

Return nourishment to it, so it can yield, again and again.

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THE FFA IN ACTION

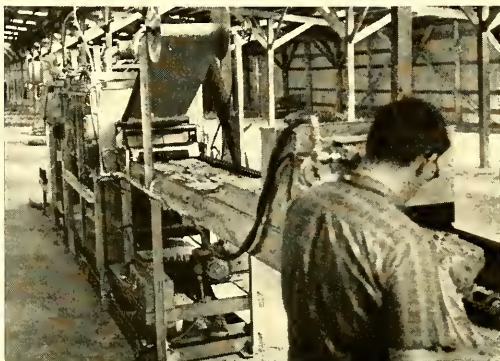


From left, Mr. William Fortschneider, advisor at Jacksonville High School, and corn growing champ, Armstrong.

ILLINOIS—Robert Armstrong, vocational agriculture student at Jacksonville High School, won the Illinois FFA corn growing contest for 1965 with a yield of 263.6 bushels per acre.

It was the highest yield ever recorded in the 19-year history of the Pioneer Hi-Yield Corn Growing Contest. More than 3,000 students from 297 high schools entered the Illinois contest. For obtaining the highest corn yield in FFA Section 15, Robert received a gold wrist watch and a \$25.00 cash award. The chapter received a "golden ear" for its trophy case.

His record was made under the supervision of his FFA advisor, Mr. William Fortschneider.



Invented by a former FFA member, this machine is capable of curing one acre of tobacco leaves in a ten-hour day.



Skyline FFA members are busy building shop project to earn money for spring trip to Yellowstone National Park.

MISSOURI—The Skyline FFA Chapter of Urbana is hard at work this year raising money for a spring trip to Yellowstone National Park. The idea of the trip is to give the chapter's 156 members a chance to see how farming and soils vary from state to state. To raise funds, the chapter is building gates, feeders, bunks, and other projects in the farm shop.

During the year the chapter has taken part in judging contests, the state convention, and other FFA-sponsored activities. Eight officers from the chapter attended the 1965 National FFA Convention at Kansas City, Missouri. (*Dale Clapp, Advisor, and John Admire, Reporter*)

KENTUCKY—When Carl Camenisch was an FFA member in rural Kentucky, the chief topic of conversation, outside the weather, was the price that good burley tobacco would bring when the broad green leaves ripened for auction. Though he admits "a lot of water has gone over the dam since those early days of the FFA movement," he has never forgotten about those tobacco leaves. As a result, he has applied for a patent on a machine that may revolutionize the tobacco industry in much the same way Eli Whitney's cotton gin revolutionized that industry.

The machine, which utilizes heat and air, reduces leaf curing time from several months to less than two minutes and could eliminate 75 percent of the hand labor connected with tobacco.

Camenisch's machine was developed by the University of Louisville's Institute of Industrial Research under a \$20,000 contract from the Harvure Company of which he is president. The patent is pending in Camenisch's name. A charter member of the Kentucky FFA Association, he earned his State Farmer Degree, won the state public speaking contest, was a member of the state champion livestock judging team, and served as state FFA secretary.

Camenisch is a graduate of the University of Kentucky's College of Agriculture.



Bill Gorton, Jr., has learned all phases of poultry work at Hardy's Poultry Farms, Inc., where he is an employee.

NEW HAMPSHIRE—William A. Gorton, Jr., of Chester has been selected as the 1966 FFA Poultry Youth from New Hampshire. Bill is a 17-year-old senior at Pinkerton Academy in Derry. His award was an all-expense-paid trip to the Junior Fact Finding Conference in Kansas City, Missouri, February 9-13. The conference is held annually in conjunction with the National Poultry Fact Finding Conference sponsored by the American Poultry Industry. The meeting is planned to stimulate interest in poultry production, processing, and marketing.

Bill's trip was sponsored by the New Hampshire Poultry Growers Association.

WASHINGTON—International relations are very pleasant and exciting for a farm boy from northern Germany.

A member of the Goldendale Chapter, Gustav Schroder has attended local project tours, county fairs, and initiations and has inspected the major agricultural areas in the state. In October, the local honorary members sponsored his trip to the National Convention, during which time he saw much of the country and became familiar with the organization and scope of the FFA. He is very impressed with the role the FFA is playing in American agriculture.

On the farm Gus is helping to manage 80 head of steers, a swine herd, and three show steers, one of which is his project. He is also assisting in both hay and grain production field work. When he returns home next July, he hopes to improve their farm by putting to use things he has learned in this country.

Gus came to the U. S. on the ICYE (International Christian Youth Exchange) program, sponsored by local organizations in the Goldendale community, including the FFA chapter. He hopes more FFA chapters and families will share their experiences by hosting exchange students, and he also encourages FFA members to travel abroad. (Ken Gronewald, State Reporter)

Foreign exchange student Gustav Schroder, right, is pictured with Ken Gronewald, Washington state reporter.



State and district officers are shown with six of 45 boxes of books collected by the FFA members for the Philippines.

MINNESOTA—The Naval Air Reserve and members of the Future Farmers of America observed Pearl Harbor Day jointly by sending more than 2,500 secondary textbooks to schools in the Philippines.

The books, all texts on general agricultural subjects, were flown from the Naval Air Station, Twin Cities, on the first leg of their journey to schools being aided by the United Nations in the Philippines. On arrival at Alameda, California, the books were unloaded from the plane and hauled to the San Francisco seaport by Livermore, California, FFA members. The book collection was made during the last Minnesota State Fair and at the 1965 state FFA convention. (W. J. Kortessmaki, State FFA Executive Secretary)



Photo by Berks-Lehigh Farmer

The Kutztown FFA Chapter won honors with this exhibit, "Finishing Beef Cattle in Feedlots," in statewide events.

PENNSYLVANIA—The Kutztown FFA Chapter is keeping up its winning ways which started with the National Gold Emblem award in Kansas City.

More recently the chapter won distinction for their exhibit, "Finishing Beef Cattle in Feedlots." The model display has been exhibited at the following places: Allentown County Fair (received first place), Kutztown County Fair (received first place), Reading County Fair (received first place), and the Pennsylvania Farm Show where they were awarded third place and \$55.00.

Another honor at the Pennsylvania Farm Show was taken by chapter member William A. Bayer, who exhibited the reserve champion pen in the broiler and roaster poultry contest. In addition, he won three first-place and three second-place ribbons. Mr. Wayne Rentschler is FFA advisor for the Kutztown Chapter.

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THE THREE "M" ERA

(Continued from Page 29)

Grain harvesting machines, like the artist's conception in this issue, could cut at a 12-mile per hour clip. For a highway transport, the wheels might be pivoted 90 degrees. Mechanical harvesting of fruits and vegetables will be a realized fact before 1980.

Tomato harvesters are a good example of what has been done to mechanize hand-harvested crops. Plant breeders at the University of California have developed a tomato variety especially suited for mechanical harvesting. This year it is predicted that 80 percent or more of California's tomato crop will be harvested mechanically.

Electronic devices will be used in many ways. A feature of the 1980 rural landscape might be towers which contain television scanners that will control tractors and other machines without drivers. Harvesting and tillage machines may be following tape controlled programs that direct the machine over the field. The farm operator will keep track of his machines by television monitors in his office and through automatic safety warning devices built into the machines.

YOUR FUTURE

"With high capital requirements in agriculture going higher by 1980 and with profit margins getting narrower, how can I start in business with limited resources?" you inquire. There is no one answer, points out Lindley Finch, vice president of the Continental Illinois National Bank of Chicago, but there are solutions. They are the same solutions that have been used for many years. Hereafter, however, they will be used in different proportions, different combinations, and for different lengths of time. Here are some of the possibilities he suggests:

The traditional owner-operator farm enterprise will be under increasing pressure; the non-owner or part-owner operator pattern will continue to become more prominent. Also, free simple ownership by one individual operator will continue to give way to divisible shares of ownership. Corporate ownership provides a vehicle for attracting risk capital and also affords a method of keeping the farm unit together as ownership changes.

While good management has always been important, in 1980 it will be paramount. Few jobs will require so wide a range of competence as will that of the farm operator of 1980. In short, farming in the next decade will be a challenging occupation. It will be the "three-M" era of agriculture, requiring the best management, machinery, and methodology you can muster.

The National FUTURE FARMER



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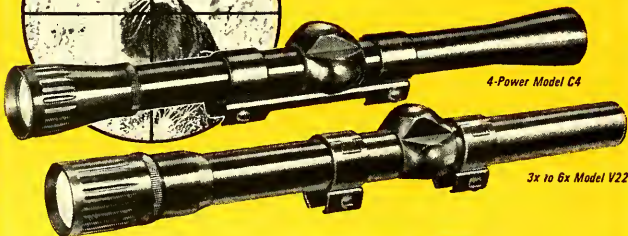
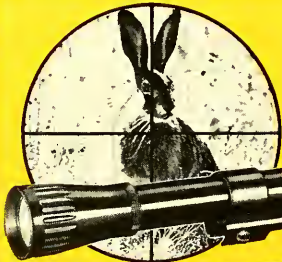
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MONEY FROM TREES

(Continued from Page 25)

3. Know the specifications for sticks to be sold.

4. Check on local insect and disease conditions.

Knowledgeable Marketing

Bernard says a profitable sale is the final step in good forest management. It decides whether the owner's investments in cash and labor have succeeded or failed. Bernard's record speaks for itself. "Our timber returns about \$12.50 per acre per year with my present management system. Sales include saw timber, stave bolts, fence posts, and fireplace wood. I believe it will continue to do at least this well for many years, and I should be able to increase it some with Christmas trees," Bernard said.

Before young Meyer took over management of the timber acreage, it had been sold to a buyer who was allowed to cut all or whatever he wanted. "We didn't realize much out of the timber when it was sold this way," Bernard explained. "I know it is much better for our future timber stand to cut and sell our own."

Bernard has also been active in wildlife conservation. Some of his achievements include making brush piles to provide cover, direct seeding of sericea or shrub lespedeza as a living border around his woodlot, developing two farm ponds and setting out pond bundles for wildlife protection and setting out 5,000 multiflora rose seedlings as a living fence.

Forestry management has paid Bernard Meyer dividends in many ways. Soil, water, crops, wildlife—all have benefited. But most important, it has brought him profit from land that might otherwise be almost worthless.



"I've never heard anyone fuss so over a little splinter!"

The National FUTURE FARMER



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Read The Label

(Continued from Page 50)

Even if you gave the correct meaning of these words, are you sure your parents and neighbors know and understand their meaning? Many FFA chapters across the country are conducting safety campaigns on how to handle man's best weapon in the fight against starvation. Weakest front on the battleground, however, is the lack of knowledge on the hazards of using chemicals.

A new handbook published by California State Polytechnic College in San Luis Obispo could become a keystone in chapter safety projects. A special feature of the book is a removable center section of charts and signs for posting in areas where agricultural chemicals are stored and used. Included is a first-aid reference chart giving symptoms and emergency treatment for various types of chemical poisoning. Other technical topics explained in nontechnical terms include toxicity, residue, state and federal agricultural and public health regulations, and comparisons of chlorinated hydrocarbons and organic phosphates (the two most common types of pesticides).

This publication and accompanying advisor's handbook are available nationally on a cost basis by writing the college.

In the meantime, read all labels twice and ask yourself if you really know what you have read. Check the glossary of terms accompanying this article. Finally, believe what you read. Follow instructions as they are printed on the label. They are not fairy tales . . . but if you don't comply with them, they can become stories of death.

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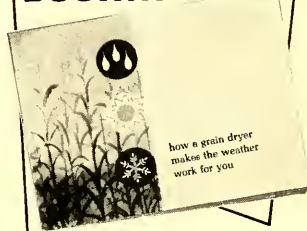
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Breaking the Soybean Yield Barrier

Soybean yields bog down, but a search is on for ways to break the 25-bushel hurdle.

BREAKING THE soybean yield barrier is becoming one of agriculture's biggest challenges.

Soybeans have been produced in the U. S. for well over 40 years, but our national yields have never appreciably exceeded 25 bushels per acre. Right after World War II there was a brief yield take-off because of improved varieties and more machine harvesting.

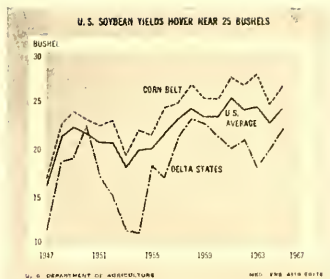
Around 1957 yields bogged down again, and for the past nine years they have been at a relative standstill with averages varying between 23 bushels and the record 25.2 bushels in 1961. Last year's crop yields were estimated at about 24.4 bushels per acre.

The reason soybean yields are so important is that both domestic and foreign demand for soybeans and soybean products has been increasing at a rapid rate in recent years. In total value, soybeans currently stand third

among U. S. cash crops. They are outranked by cotton and corn. During the past three marketing years, however, exports of soybeans (including soybean oil and meal) returned more dollars to the U. S. than any other single agricultural commodity. U. S. farmers export close to 95 percent of total world soybean exports.

Economists say that by 1970 total demand is likely to require an annual U. S. soybean crop of more than a billion bushels. So far, the need for greater soybean production has been met by expanding acreage. Since World War II, soybean acreage has tripled while production has quadrupled.

To break the yield barrier, the USDA is expanding its research program in such areas as culture, breeding, diseases, variety, evaluation, and control of pests, weeds, and nematodes.



For the past nine years yields have been at a standstill as this chart shows.



Increased acreage is being planted to soybeans, ranked third in the U.S.

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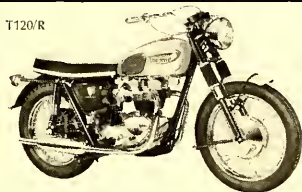
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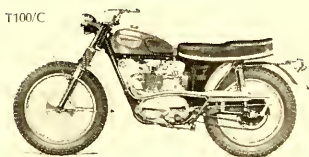
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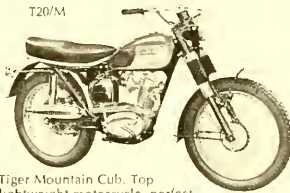
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TRIUMPH

Servicing Small Engines

HOW TO IMPROVE PERFORMANCE

By

Melvin Long



SMALL GASOLINE engines which furnish power to mow the lawn, elevate hay and grain, and dig post holes can be the source of annoyance and expense when they fail to operate properly. Here are ten tips for keeping them on the job.

Proper mounting. It's essential to provide a solid base so the engine can be securely fastened. Otherwise, vibrations will make it impossible to keep your engine in proper adjustment or even to keep it from losing parts.

Keep it clean. A small amount of dirt can damage your engine requiring a complete overhaul. The carburetor air cleaner is very important in keeping out dirt. For stationary use, the oil bath air cleaner is often used. For portable use, you'll need a dry or oil-wetted cleaner. Whatever type you have, the cleaner should be serviced regularly. The frequency may vary from once every 50 hours, in relatively dust-free conditions, to several times daily, under severe dust conditions.

Stop vapor lock. Vapor lock can occur during warm weather operation. If this happens while you're using the proper seasonal fuel, cleaning the flywheel fan and air-

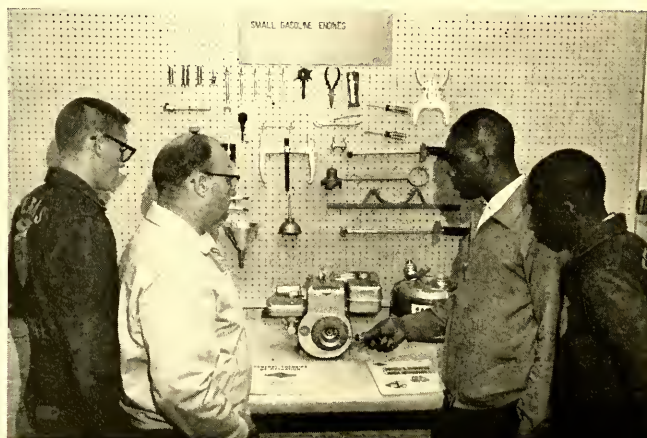
filter screen will help. Air may be entering the line, so tighten all fuel-line connections. Also check to see that the line is not near, or in contact with, the hot muffler or engine block. If it is, it may be necessary to bend the line or install a flexible line.

Reduce valve failure. Exhaust-valve failure is caused by the build-up of residue from burning fuel and lubricating oil. These deposits keep the valve from seating fully, thereby permitting hot gases to rush by the valve. This pits the valve face and seat. You can buy material to hard-surface the valve face. Inserts for the seat are also available for some engines. Valve rotators can also be installed. These prevent one part of the valve face from continuous exposure to leakage. These modifications, though an added expense, will increase valve life from two to six times. They are worth considering, especially under conditions of constant speed and load.

Keep the valves adjusted. Although there is normally little change in valve lash of this type engine, it's a good idea to check tappet clearance every 200 hours and reset to the manufacturer's recommendation. It's good insurance against noisy burned valves and power loss.

Keep inside of engine clean. Build-up of combustion chamber deposits will prevent the engine from delivering full horsepower. This is especially true of deposits around the intake valve. Constant speed and load seem to increase deposits. In this case, removal at regular intervals should be part of your maintenance procedure.

Check the ignition system. Remove cable from the magneto end-cap socket, and insert a short, stiff piece of wire. Bend this to within one-eighth inch of the engine block. Now crank the engine. If you get a strong spark, the magneto is probably all right. Any ignition difficulty is in the cable, terminals, or spark plug. If you don't get a good spark, then you are justified in opening the magneto. If



Here are the tools and equipment used for teaching a unit in small gasoline motors. From left to right are Johnny Prihoda, student; Gabe Dooley, Jr., advisor; Lorenzo Crosby, Jr., advisor; and Jeff Kelly, a Vo-Ag III student.

SMALL ENGINE IDEA FOR VO-AG

By

Gabe Dooley and Lorenzo Crosby

THE INCREASED use of small gasoline engines on the farm has greatly increased interest in the proper use and maintenance of these units by Future Farmers and their advisors.

To add a competitive spirit to our program at La Grange, Texas, we give regular quizzes on identification of

the points are pitted, they can be smoothed with a small point file and reset to the proper gap. If they are badly worn, they should be replaced. Your instruction book should give you the exact directions for replacing and adjusting points. If it doesn't, or if you are not "mechanically inclined," let your serviceman work on the magneto. This also applies to replacing condensers and timing the magneto.

The spark plug should be kept clean, inside and out. It should be removed at least once every 100 hours, inspected or cleaned and regapped to the proper setting. If the electrode seems to erode rapidly, try using a colder type plug than the manufacturer recommends.

Use proper gasoline and oil. Use only reputable, well-known brands of regular gasoline. Fuels with the lowest possible lead content but at least an octane-rating of 75 are best. Gasoline with too low an octane rating will cause "pinging" in the engine. This causes cylinders and pistons to score, head gaskets to blow out, and bearings to fail. A reputable station changes the "blend" with the seasons to provide easy winter starting and to reduce evaporation in the summer.

The oil should be drained every 50 hours of operation or more often if used under dusty conditions. Be sure to drain the oil when the engine is warm. For summer use an SAE 30 viscosity; for air temperatures of 40 degrees F. down to 0 degrees F., use SAE 20; and for less than 0 degrees F., use SAE 10W oil.

Winterizing. If your engine is to be used regularly during the winter, about the only thing that you need to do is to change the crankcase oil and the oil in the air cleaner.

Part-time service. If your engine is used seasonally, here is how to prepare it for storage:

1. Protect the internal working parts of your engine by doing the following: Make up a quarter-pint mixture of

one-half kerosene and one-half oil of the type in the crankcase. Before you shut off the engine for the final time, remove the air-cleaner connection from the carburetor, and pour mixture into carburetor. When a heavy, bluish smoke appears at the exhaust, shut off the engine.

2. While the engine is warm, drain all the crankcase oil.

3. Drain the entire fuel system including the gasoline tank, lines, carburetor, strainer and sediment bulb, and the fuel pump, if used. It will be necessary to loosen some connections to do this.

4. Remove dust and sediment from the air cleaner. If of the oil bath type, remove the oil.

5. Thoroughly clean the outside of the engine.

6. All exposed, unpainted metal should be coated with a rust-preventive grease.

7. Storage inside a building is highly recommended. However, if this is impossible, provide a good covering.

To place the engine back in service, you should:

1. Remove engine base from the crankcase, pour off any water that formed by condensation, and remove all sediment which may have settled out of the oil. A new gasket will be needed when you replace the engine base.

2. Refill the crankcase with a quality oil to the high level mark. Do not use any oil heavier than SAE 30.

3. Refill the air cleaner with oil to the proper level.

4. Replace the spark plug with a new one.

5. Refill the fuel tank.

The above points apply in general to any manufacturer's engine. However, the instruction manual that came with your engine is your best source of specific information. If you don't have one, get one from your serviceman, or write to the engine manufacturer.

Remember, like all precision machinery, the small gasoline engine must be given regular care and operated in accordance with instructions.

parts and theory of operation. Students who average 85 percent or more are awarded certificates of merit by the Texas Association of Future Farmers of America.

The first step in the Texas program is a summer workshop for teachers to acquaint them with the theory and repair of small gasoline engines. Then the vocational agriculture students receive instruction as they watch the advisors disassemble and reassemble a small engine. Charts, manuals, and other visual aids are used to add interest. After this, the students are allowed to disassemble and then reassemble a motor at their own speed under supervision. Following this procedure, the young farmers bring in their own motors for repair.

The addition of small gasoline engine instruction to the farm mechanics program at the La Grange High School vocational agriculture department has greatly enriched the total program.

SMALL ENGINE EQUIPMENT CHART

SPECIAL TOOLS—Briggs and Stratton Tool Kit No. 291661

OTHER TOOLS

Torque Wrench	0-600 inch pounds
Torque Wrench	0-150 inch pounds
Hand Valve Grinder	
Coil and Condenser Tester (optional)	
Funnel Measure	
Outside Micrometer (optional)	0" to 1"
Piston Ring Expander	
Hand Oiler	
Needle Nose Pliers	
Circle Grip Pliers	
Nut Driver	1/4"
Feeler Gauge	
Screw Driver	6" blade
Phillips Screw Driver	6" blade
Cold Chisel	5/8"
Combination Box-End Wrenches (one each)	1/4", 5/16", 3/8", 7/16", 1/2"
Spark Plug Sockets	13/16", 7/16", 1/2" with 3/8" drive



Wilt Chamberlain set a record for a single game by scoring 100 points.

SPORTRAIT

By
Stan Allen

At Chamberlain's current pace, he could easily reach 30,000 points.

WILT CHAMBERLAIN of the Philadelphia 76'ers professional basketball team gave fans a rare New Year's treat with a 50-point performance in a nationally televised game on January 2. He hit the hoops for 22 field goals and six free throws in leading the 76'ers to a 133-122 win over the New York Knicks.

That performance earned him membership into pro basketball's exclusive 20,000-point club. He is the second player in league history to reach that mark. Bob Pettit, former St. Louis Hawks' star, scored his 20,880 points in a period of 11 years while Wilt has passed that mark in only seven seasons with a total of 20,978 points as of

February 20. Wilt is the new all-time scoring king of the National Basketball Association.

Wilt Chamberlain started his scoring career right in Philadelphia, his home town. He set a state record of 2,252 points in three seasons, playing at Philadelphia's Overbrook High School, and he continued his scoring ability at the University of Kansas where he won All-American honors twice. His fine collegiate record and tremendous potential made him a sure draft choice of his home town pro team, the old Philadelphia Warriors.

Wilt at 7 feet 1½ inches and weighing 250 pounds had the build for pro basketball. He is strong, has good co-

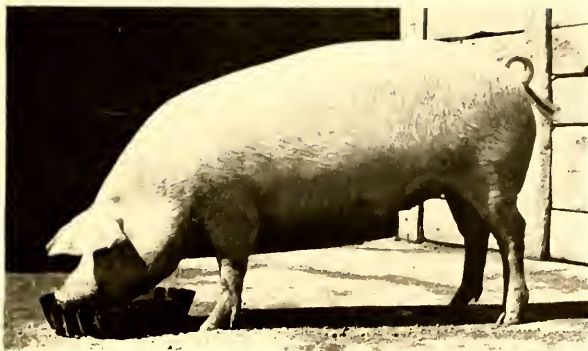
ordination and stamina, and is fast for such a big man. It took many long, hard hours on the practice courts to develop and perfect his game, but the extra effort has paid off in a lifetime field goal shooting percentage of .506. His famous "dunk" shot is unstoppable, and he has a good one-hand shot from the outside. Most experts agree that Wilt is the best defensive player under the boards, and his record of 55 grabs in one game will be hard to equal. He led the league in rebounds in his first four years and has finished second to the Boston Celtics' great Bill Russell during the last two seasons.

Wilt joined the Warriors in 1959 and was an instant success in pro ranks. He broke almost all NBA records his rookie season with such marks as most points scored one season, 2,707; highest scoring percentage, 37.6 points; and most rebounds, 1,941. In addition, his 1,065 field goals were tops. He hit the 50-point mark in seven games that year to become the first player in league history to do so. He received Rookie of the Year honors and was named to the All-Star East-West Game where he won the game's outstanding player award.

That first season was not beginner's luck as Wilt was scoring leader again in the 1960-61 campaign with 3,033 points. He cleared the boards of 2,149 rebounds in 1960 to become the only player to ever pull down 2,000 rebounds in one season. His amazing league-leading field goal percentage that year was .565. Wilt's best season to date was in 1961-62 when he scored 4,029 points, a record that may never be matched, for a league mark of 50.4 points per game average. He again hit the 2,000 mark in rebounds with 2,052. The record book devotes a full page to his play in a game against the New York Knicks at Hershey, Pennsylvania, on March 2, 1962. Wilt hit 36 of 63 field goal shots and 28 out of 32 free throws to score 100 points in one game. In the all-time records he has five games with 70 points or more, 21 with 60 or more, and 80 games of 50 or more points.

It would take a book to list all of Chamberlain's records. He has been named to the first or second NBA team and played in the All-Star East-West Game every year he has been in the pro ranks. He has been the top NBA scorer in his six seasons and is leading the league going into the last month of this current season. His scoring average on February 20 was 34.5 percent with 2,141 points. He is still hitting on more than half of his field goal tries with a .541 percentage. At the amazing shooting pace he has set, he could easily reach the 30,000-point mark and set a record that should stand for some time to come.

The National FUTURE FARMER



History of the Breed

The American Lacombe

THE FIRST of the Lacombe breed entered the United States in 1962 and went to Grand Mound, Iowa, where the American Lacombe Swine Association was formed.

The Lacombe breed was developed by the Canadian Department of Agriculture at the Lacombe, Alberta, Experimental Farm. It is the result of a hybridization and selection program initiated in 1947 which combined the blood of the Danish Landrace, the Chester White, and the Berkshire breeds.

The first litters of the foundation were produced in 1948. During each of the three subsequent generations, gilts were saved and mated to new foundation boars. The herd was closed to all outside stock in 1952. In that year the contribution of the parent breeds was stabilized at the present level of 55 percent Danish Landrace, 23 percent Berkshire, and 22 percent Chester White.

Choice of foundation breeds was influenced by the requirement that any new breed should produce hybrid vigor. The Berkshire, with its reputation for milking capacity, uniformity of back fat, and fullness of ham, was chosen as the female side of the foundation, and ten representatives of this breed were obtained. The desired white color and bacon characteristics were obtained from five boars of a Landrace-Chester White line developed in the United States and from two purebred Danish Landrace boars. The breed now traces to seven of the ten foundation Berkshires and to seven foundation males.

It is a white bacon-type breed with a

medium-sized flop ear and a medium-length, slightly dished face. Of the three parent breeds, it resembles the Danish Landrace in physical appearance. Mature boars weigh from 600 to 900 pounds and sows from 500 to 800 pounds. The females are gentle mothers and good milkers. Individuals of the breed are of a docile nature and are "easy keepers."

Klaus Schnack represents the American Lacombe Swine Association at Grand Mound, Iowa. Inquiries regarding the breed should be addressed to the association, Grand Mound, Iowa 52751.



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HAVE YOU HEARD THE ONE ABOUT

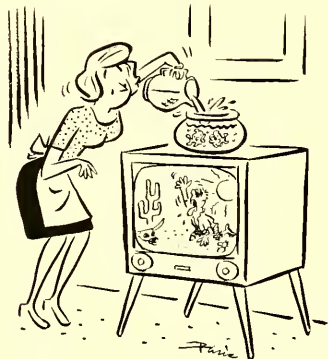
Little boy: "Mother, here is a green snake."

Mother: "Leave it alone. It is probably just as dangerous as a ripe one."

Mike Broun
Mayo, Florida

Joe: "Why did the little moron wrap his shotgun barrel around the tree?"

Bill: "He wanted to curl his bangs."
Jimmy Hicks
Henderson, Kentucky



Teacher: "Tommy, name five things that contain milk."

Tommy: "Butter, cheese, ice cream, and two cows."

Robert Davis
Clayton, North Carolina

The young bride was bragging to her husband as she served him supper: "There are two things that I can cook real well. One of them is meat loaf, and the other is peach cobbler."

The young husband surveyed the supper and asked, "Which is this?"

Jim Tom House
Brenham, Texas

Bill: "In the summer I get up as soon as the first rays of sun come in my window."

Sam: "Isn't that rather early?"

Bill: "No, my room faces west."

Howard Hannon
Campobello, South Carolina

A Texas lad rushed home from kindergarten insisting his mother buy him a set of pistols, holster, and gun belt.

"Why, whatever for, dear?" she asked. "Not for school?"

"Yes," he asserted, "the teacher said tomorrow she was going to teach us how to draw."

Mary Case
Lyons, Nebraska

The music had just stopped at one of those modern teen dances. As a youth walked toward the side lines, a girl rushed up to him and thanked him for the dance.

"I wasn't dancing," the young man hastily replied. "I was just trying to get past you to the soft-drink machine."

Ronald Lofgren
Felton, Minnesota

Officer: "What are you men doing climbing trees and crawling through the bushes?"

Private: "Well, sir, we camouflaged the gun before lunch, and now we can't find it."

Rex Saunders
Vale, Oregon

Lady (standing in the middle of a busy street): "Officer, can you tell me how to get to the hospital?"

Policeman: "Just stay where you are."

Dennis O'Conner
Murphersboro, Illinois

Librarian: "Quiet, please. The people next to you can't read."

Student: "What a shame! I've been reading since I was six years old."

Steve Locke
Paris, Texas



A farmer was watching his teen-age daughter's party and was fascinated by the frug. He scratched his head and remarked to his wife: "Well, if that doesn't bring on rain, nothing will!"

Henry Sherrer, Jr.
Bay City, Texas

A Kentucky farmer, having seen the format of new car advertisements, decided to list his cow for sale in the same way: "One Holstein cow, base price, \$100. Accessories: udder, \$75.00; two-tone color, \$30.00; four split hooves, \$10.00 each; extra stomach, \$35.00; dual horns (optional), \$5.00 each. Total price, \$290."

Paul Christeson
Graceville, Minnesota

A little boy who was taken to see ballet for the first time watched as the dancers spun around on their toes. After a while he said, "Mommy, why don't they just get taller girls?"

Kathy Fries
Wapato, Washington

Charlie, the Green Hand



"Plow left field? I thought you said you wanted me to plow left field."



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"Prove all things; hold fast that which is good." I Thessalonians 5:21

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